

California



Active Duty

Tobacco Use Survey—2004

California Department of Health Services
Tobacco Control Section

Prepared by
Uniformed Services University of the Health Sciences



Arnold Schwarzenegger, Governor
State of California

S. Kimberly Belshé, Secretary
California Health and Human Services Agency

Sandra Shewry, Director
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Executive Summary

The Uniformed Services University of the Health Sciences (USUHS) undertook this study in response to a request from the California Department of Health Services (DHS) to conduct epidemiological studies to identify adult tobacco use behavior, knowledge, and attitudes among 11 special populations within the state, one being active duty military personnel.

Tobacco use and behaviors, as well as knowledge, attitudes, and beliefs concerning tobacco, were assessed using a survey methodology. A previous telephone survey used by the state of California was modified to reflect the unique characteristics of the active duty military population, and was formatted for mail and Internet response capabilities. Using the Defense Eligibility and Enrollment System (DEERS) database, a sample size was calculated that would achieve a margin of error of no more than 3% for a 95% confidence level.

A two stage mail methodology was employed between January 12, 2004 and March 1, 2004. An overall response rate of 22.2% was achieved. After cleaning and editing the data, the data were tabulated using SAS® version 8.0 for Windows. Survey procedures were used to account for weighting and stratification. Frequency tables were generated for each questionnaire item, and key items were tabulated by gender, age, education, ethnicity, rank, and smoking status.

In addition, findings from the active duty military population were compared to data obtained from the 2003 California Adult Tobacco Survey (CATS) for the California general population. Prevalence for selected items was calculated from the two surveys, along with appropriate standard errors, and z statistics were used to test for statistical significance at the 5% level.

Findings

Tobacco Use

1. Active duty personnel reported using cigarettes significantly more than the general California population, and other tobacco products (snuff and chewing tobacco) three times more frequently.
2. Younger active duty personnel reported smoking cigarettes more than older personnel.
3. Older active duty personnel reported smoking more cigarettes per day than younger personnel.
4. Marines reported smoking more than the other military services.
5. Striking differences were reported in the smoking rates between active duty and California males and females:
 - Active duty males ages 18-34 reported smoking twice as much as the comparable California population.
 - Active duty females greater than age 45 reported smoking at two-thirds the rate reported by the comparable California population.
6. It was reported active duty personnel (who smoke) start smoking, and also become regular smokers, 18 months later in life than California respondents.
7. 40% of young active duty male smokers, compared with less than 3% of California young male respondents, were married.
8. Over 90% of active duty personnel reported smoke-free homes, and 98% reported smoke-free workplaces.
9. Being in "social situations" and "stress" accounted for 50% of the reasons active duty personnel reported starting to smoke; deployment from their normal work/home environments was not a big factor in promoting smoking.

Secondhand Smoke Exposure

About half of active duty respondents reported encountering secondhand smoke (SHS) in locations other than home or work.

Anti-Tobacco Information Exposure

1. Active duty personnel reported consistently higher rates of recognizing anti-tobacco advertisements:
 - 96% of active duty respondents compared with 90% of California respondents reported seeing anti-tobacco advertisements on television;
 - 60% of active duty respondents compared with 40% of California respondents reported hearing anti-tobacco advertisements on radio;
 - 66% of active duty respondents compared with 48% of California respondents reported seeing anti-tobacco advertisements on billboards, and
 - 36% of active duty respondents compared with 23% of California respondents reported seeing anti-tobacco advertisements in newspapers.

Tobacco Knowledge and Attitudes

1. Active duty personnel reported a dichotomous effect of smoking on performance
 - High effect on physical fitness
 - Low effect on military readiness or job performance
2. Active duty personnel reported strong negative opinions about the harmful effects of SHS.

Other

1. Most of the active duty personnel bought their tobacco products on base at the Base Exchange or Commissary.
2. Most of the young active duty respondents (82%) reported a desire to stop smoking, and 45% reported their intention to stop within the next 30 days.
3. It was not clear whether they were getting full assistance from the military in these efforts.
 - Less than half (40%) reported that their doctor had advised them to stop smoking.
 - Only about half recognized anti-tobacco messages at their current duty station.

CHAPTER 1 Introduction

This report describes the results of a study of the tobacco habits of active duty military personnel stationed in the state of California. The Center for Population Health (CPH) at the USUHS in Bethesda, Maryland, undertook this study in response to a request from the California DHS to conduct epidemiological studies to identify adult tobacco use behavior, knowledge, and attitudes among 11 special California populations. One of these special populations was active duty military personnel stationed in California, and DHS indicated that they had a need for tobacco-use related data for this population segment. CPH's goal is to provide the California DHS Tobacco Control Program with information about this particular special population to support its tobacco prevention activities.

Background

The United States (U.S.) military is a large, complex, organization composed of four separate uniformed services (U.S. Army, Navy, Marine Corps, and Air Force – and for the purposes of this study, also the U.S. Coast Guard). The members of these uniformed services are quite diverse in their places of origin, and in their socio-demographic characteristics.

Accessions to the military in 2001, for example, demonstrate this diversity in terms of place of origin. In that year, 14% of accessions to military service were from the Northeast region of the U.S., 20.4% from the North Central Region, 42.9% from the South Region, and 22.8% from the West Region.¹ While their “home of record” remains their place of origin throughout their time of service, military members are quite mobile. In general, active duty personnel move from assignment (station) to assignment every four-six years. As of March 31, 2004, over 80% of military personnel were stationed within the U.S., 200,000 in Iraq, and the rest in over 80 countries around the world.²

The following description of the military services demonstrates the diversity in socio-demographics. As of August 2004, 1,496,628 active duty military members were in uniform. Of those, 175,240 were officers (46,088 senior officers [officer rank O-4 to O-10] and 129,152 junior officers [officer rank O-1 to O-3]), 1,125,987 were enlisted (142,055 senior enlisted [enlisted rank E-7 to E-9] and 1,106,369 junior enlisted [enlisted rank E-1 to E-6]), and 17,700 were Warrant Officers (a commissioned corps, falling between enlisted and full commissioned officer corps).³ The Army is the single largest service with 34.1% (509,717) of the total active duty military population, followed by the Air Force with 25.8% (386,343), the Navy with 25.4% (379,368), the Marine Corp with 12.1% (180,936), and the Coast Guard with 2.7% (40,264). The military remains largely a young, male organization. Of the active duty personnel, 85.1% (1,278,709) were male, most of whom (77.2% or 1,155,788) were between the ages of 18-34. A very small number were noted to be less than 17 years of age, but were not included in the analysis so that the age brackets were comparable with the CATS and Department of Defense (DoD) Survey of Health Related Behaviors Survey. Analysis of the age distribution revealed 19.6% (294,001) of personnel to be between the ages of 35-44, 3.5% (51,840) between the ages of 45-64, and 0% (128) were over age 65. Most members' ethnicity was white non-Hispanic (64.9% or 971,436), followed by black non-Hispanic (18.2% or 272,838), Hispanic (8.9% or 133,018), Asian/Pacific Islander (4.6% or 68,436), and American Indian/Alaskan Native (1.5% or 22,087). Over half (55.4% or 828,731) were married.

¹ 28th Annual Department of Defense report on social representation in the U.S. Military Services; www.defenselink.mil/prhome/poprep2001/pdf/chapters2001.pdf.

² Ibid

³ Department of Defense Active Duty Military Personnel by Rank/Grade; <http://web1.whs.osd.mil/mmid/military/RG0402.pdf>

California Active Duty Population

At the time of the study, there were 156,402 active duty personnel stationed at 16 military bases in California. Of these, the largest numbers were in the Navy and the Marine Corps. Mirroring the worldwide military staffing patterns, the largest subset of the population was junior enlisted personnel. The service affiliations and ranks of the active duty personnel stationed in California are displayed in Table 1.

The majority (76.3%) of California active duty personnel were between the ages of 18-34 and 86.9% were male. The most common ethnicity was white non Hispanic (58.8%), followed by Hispanic (14.5%), and just over half were married. The ages, genders, ethnicities, and marital status of this population are also shown in Table 1.

Smoking in the Military

Smoking is a long held tradition in the American military. In World War I, the American Red Cross reports volunteers handing out cigarettes to soldiers "as close to the front as the artillery fire permitted."⁴ Cigarettes were routinely placed in soldiers' field rations in World War II, continuing through the Vietnam conflict. More recently, however the DoD has aggressively promoted abstinence from cigarettes. In the 1980s the military began offering smoking cessation classes, in the 1990s raised the price of cigarettes in military commissaries (by eliminating the government subsidies), and issued a directive declaring DoD workplaces to be smoke-free. In 2000, this was widened to include all DoD facilities (including living and recreation areas).

However tobacco use among military personnel remains problematic. It is reported that the DoD spends \$930 million per year for its beneficiaries' smoking-related illnesses and lost productivity.⁵ In its request for proposal, California DHS drew from the DoD Survey of Health Related Behaviors to state its interest in this segment of the overall California population. This survey, which has been done eight times since 1980, reveals a steady decline in smoking prevalence from 51% in the first survey (1980), to a low of 29.9% in 1998.⁶

Of recent concern is the rise in prevalence noted since this 1998 low. The 2002 survey documented a rise in the smoking rate among military personnel to 33.8%, well above the 12% Healthy People 2010 target.⁷ There has been an association raised between the perceived high stress level in the military and cigarette smoking,⁸ although boredom and the need to relax were mentioned as other contributing factors. Anecdotal reports from military personnel returning from Operation Iraqi Freedom indicate that smoking rates increased from pre-deployment states.

This report will document the tobacco use behavior, knowledge, and attitudes of military personnel stationed in California, compare these factors with a comparable population of California smokers, and focus on any areas of variation, and will make recommendations to address smoking reduction in the military.

⁴ American Red Cross Virtual Museum; <http://www.redcross.org/museum/vmuseum/19001919b.html>

⁵ Less Smoking Improves Troops Health, Cuts Healthcare Costs, U.S. Military Newsletter, June 6, 2004, <http://usmilitary.about.com/library/milinfo/milarticles/blsmoking.htm>

⁶ Department of Defense Survey of Health Related Behaviors, 2002, <http://www.tricare.osd.mil/main/news/2002WWFinalReport.pdf>

⁷ Healthy People 2010, Leading Health Indicators, http://www.healthypeople.gov/document/html/uih/uih_4.htm#tobaccouse

⁸ Bray RM. Fairbank JA. Marsden ME. *Stress and Substance Abuse among Military Women and Men*. Am J Drug Alcohol Abuse 1999 May 25(2):239-56.

Table 1-1
Comparison of California and National Active Duty Military Populations

		California Active Duty Population	National Active Duty Population
Age	18-34	76.3%	77.2%
	35-44	19.2%	19.6%
	45-64	4.5%	3.5%
	65+	0%	0%
Gender	Male	86.9%	85.1%
	Female	13.1%	14.9%
Ethnicity	White non-Hispanic	58.8%	64.9%
	Hispanic	14.5%	8.9%
	Black non-Hispanic	13.3%	18.2%
	Asian/Pacific Islander*	9.7%	4.6%
	American Indian/Alaska native*	1.5%	1.5%
	Other*	1.7%	NA
Marital Status	Married	58.4%	55.4%
	Not married	41.6%	44.6%
Service affiliation	Navy	39.6%	25.4%
	Marine Corps	30.3%	12.1%
	Air Force	15.2%	25.8%
	Army	11.7%	34.1%
Rank	Junior enlisted	78.9%	73.9%
	Senior enlisted	7.9%	9.5%
	Junior officer	7.9%	8.6%
	Senior officer	4.4%	3.1%

*These groups are collapsed into the category "other" throughout the rest of this report, and not separately analyzed

Survey Design and Data Collection

This study of the tobacco use behavior, knowledge, and attitudes of active duty military personnel stationed in California was survey-based, using a modified version of the current CATS. This new instrument, the California Active Duty Tobacco Survey (CADTS), was modified in two basic ways. First, it was converted from a telephonic survey into a paper and Web-enabled instrument. Second, some of its questions were modified or eliminated to take advantage of other available sources of required data and to achieve maximum military focus. When the draft CADTS instrument was completed, it was successfully pilot tested and forwarded to the DoD for approval.

The study sample was extracted from the DEERS which contains socio-demographic and enrollment data about all military beneficiaries. A sample size was calculated to achieve a margin of error of no more than 3% with a 95% confidence level.

The CADTS was administered over a nine-week period beginning in January 2004 in a two-wave approach, with an Internet response option available. The collected data were cleaned, edited, and forwarded for analysis. The data were analyzed descriptively, comparing the tobacco use behavior, knowledge, and attitudes among multiple sub-groups of the military population. This analysis was used to define the typical military smoker and non-smoker. This population was then compared with a demographically similar "all-California" population. Lastly, areas of substantial differences were explored more thoroughly.

CHAPTER 2 Data Collection

Questionnaire Development

The CADTS instrument was adapted from the California DHS 2003 CATS telephone survey instrument. In order to address the challenges of various federal laws and DoD regulations, and the mobility of the military population, USUHS and its subcontractor, The NRC+Picker Group, modified the original instrument into a mail survey that could also be mounted on a Web-based platform.

Mail Survey

In developing the survey, USUHS and The NRC+Picker Group eliminated several CATS demographic questions (such as “What is your age?”, “What county do you live in?”, and “What is your zip code?”), since these data were obtained from DEERS. In addition, several non-relevant questions were removed, including questions asking about the respondent’s current health plan (Q73-74), employment status (Q85-92), behavior toward employer’s smoking policies (Q99-103) and college enrollment status (Q115-117).

The mail format requirements dictated that the order of some of the questions and type of the response choices be changed. For instance, the question “How long has it been since you smoked on a daily basis?” was an open ended response for the telephone survey. On the mail survey, it was modified to provide seven options ranging from less than one day to five years or more.

Next, investigators reviewed potential survey questions, not already in the CATS instrument, that responded to DHS needs and addressed peculiar aspects of the military environment. From this review, 13 new questions were added, with several questions relating specifically to the military experience. These questions included:

- Physical fitness status
- In what situation did you first start smoking cigarettes?
- Where do you usually buy your cigarettes?
- The last time you purchased cigarettes did you take advantage of coupons, rebates, by 1 get 1 free, 2 for 1, or any other special promotion?
- How much do you usually pay for a carton of cigarettes?
- What is your military rank?
- In the last 12 months, did a unit commander or other military leadership advise you to stop smoking?
- Did you try to quit smoking when a unit commander or other military leadership advised you to stop smoking?
- Have you been to a hookah bar in your state in the past 12 months?
- Did you see or hear any anti-tobacco messages during basic training?
- Did you see or hear any anti-tobacco messages at your current command?
- Where have you seen or heard any anti-tobacco messages at your current command?
- Tobacco use has a negative effect on my physical fitness (Y/N).
- Tobacco use has a negative effect on my job performance (Y/N).
- Smoking cigarettes has a negative effect on my military readiness.

With input from representatives of the TRICARE Management Agency (the office that oversees the DoD’s worldwide healthcare program), and the Offices of the Army, Navy, and Air Force Surgeon General, investigators finalized the new survey instrument, in preparation for pilot testing.

Internet Survey

In addition to the mail survey, the investigators also developed a secure Internet site and Web-based instrument for the study. All questions for the Internet survey were identical to the mail survey. Respondents used an assigned user name and password

to access the survey. Once respondents either completed the survey or logged off the site, these user names and passwords were discarded by the program and were no longer usable through the Internet site.

Pilot Testing

In March 2003, investigators finalized the 125-item pilot survey instrument. Both the mail and Internet instruments were pilot tested with 50 volunteer military members at Aberdeen Proving Ground, Ft. Meade, Maryland. Twenty-five volunteers completed the mail version of the survey and 25 volunteers completed the Internet version of the survey.

Results indicated that it took respondents an average of 28 minutes to complete the mail survey and an average of 24 minutes to complete the Internet survey. Respondents were interviewed to determine the ease of taking the survey and their comprehension of the various elements. When the completed surveys were processed, they were examined for content and process accuracy, including skip patterns, response options, coding schemes, the ease of completing both the mail and Internet versions of the survey, and the scanning of the returned questionnaires.

Response options were confirmed for all questions. The DoD approved the final survey instrument in December 2003.

Sampling Plan

To determine the sampling plan, investigators queried the DEERS database to identify active duty military members, including the Army, Navy, Air Force, and Marines, stationed in California. Using the following equation, the sample size was calculated to achieve a margin of no more than 3% for a 95% confidence level.

$$S = \chi^2 NP(1-P) / d^2(N-1) + \chi^2 P(1-P)$$

where

S = required sample size.

χ^2 = the table value of chi-square for 1 degree of freedom at the desired confidence level (.05).

N = the population size.

P = the population proportion (assumed to be .50 since this would provide the maximum sample size).

d = the degree of accuracy expressed as a proportion (.05).

Next, investigators assessed the DEERS sample for data format, accuracy, and completeness, using U.S. Postal Service. This service provides new addresses for persons who have submitted their addresses to the U.S. Postal Service within the past 48 months. In addition, the following verification procedures were performed on the DEERS sample data:

- Correct and consistent formatting;
- Record counts;
- Blank records;
- Unique keys (unique identifiers for every record);
- Duplicate records;
- Valid names (first name, last name);
- Valid addresses (no missing or incorrect elements); and
- Range checks on data elements (date of birth, service, state, country).

Prior to mailing, an address hygiene software application was applied to reformat incorrect or non-conforming mailing addresses.

Fielding Methodology

A two-wave mail methodology (survey, survey) with an Internet option was used. The first mailing was sent in early January 2004, and the follow up mailing to non-responders was sent three weeks later. Surveys were processed daily making results available and up-to-date throughout the fielding period. A unique identifier was assigned when the surveys were first generated linking all records in the response data set to the raw sample file. This allowed the surveys to be individually monitored while protecting sample identity.

As part of the fielding methodology, the following procedures were followed:

- All outgoing mail pieces used First Class postage and postal bar coding.
- The survey and cover letter were mailed to specific individuals and included the target respondents' name, address, and a signature from the USUHS Director of the Health Services Administration Division to legitimize the project. The cover letter included the USUHS and DoD logos.
- A staffed, toll-free telephone number was provided on the cover letter for any questions which members may have had about the study.
- The mailing piece included a postage paid business reply envelope addressed to the NRC+Picker Group.
- Members choosing the Internet option utilized a user name and password assigned to them via the cover letter. Once completed, the user name and password was eliminated from the Internet site so additional surveys would not be accepted under that survey control number.

Response Tracking

During the fielding period, the non-deliverable rate was examined and a large number of addresses were found to be returned due to insufficient addresses. In response, investigators regenerated 654 surveys and mailed these surveys on February 20, 2004. This resulted in moving the final fielding cut-off date to March 1, 2004. Applying the above methodology, the mail protocol adhered to the following schedule:

- First Survey Mailing: January 9, 2004
 - 15,790 mailed; 1,943 returned, return rate of 14.2%
- Second Survey Mailing: January 30, 2004; February 20, 2004
 - 13,589 mailed, 840 returned, return rate of 7%
- Response Cut-off: March 1, 2004
 - 576 mailed, 42 returned, return rate of 7.3%

Of the 2,825 surveys returned, 2,455 surveys were completed by mail and 370 surveys were completed via the Internet, resulting in a final response rate of 22.2% (calculated by dividing the number of responses by the number of surveys mailed and adjusting for non-deliverables).

The Air Force had the highest response rate with 25.7%, followed by the Navy and Army with response rates of 25.2% and 20.3 % respectively. The Marines had the lowest number of returned surveys (487) resulting in a response rate of 17.1%. Additionally, web returns accounted for 13.1% of the military's returned surveys.

Almost six out of ten (57.7%) respondents reported having been deployed for Operation Iraqi Freedom at one time, most of them (59.6%) for six months or less. Adequate response rates were achieved, and it was felt that deployments to Iraq and/or Afghanistan had no apparent effect on overall response rates.

Data Cleaning and Editing

The investigators used various data cleaning and editing techniques to assure credibility of the data. Before anything else, all personal identification data were stripped. Frequency tables and cross tabulations were used to examine the range of values recorded for each data item to ensure that all values were appropriate for the corresponding question item. Checks were conducted to ensure that all skip patterns were consistent. Questions that were answered but should have been skipped were coded with a missing value.

After data cleaning and editing were completed, The NRC+Picker Group produced sample and final return datasets for analyses in SPSS, SAS, and DBF versions.

The sample file, which included all persons identified for the project, consisted of all demographic fields originally provided from the DEERS extract. The return file, which included only survey respondents, consisted of all original DEERS fields and responses to all CADTS survey questions.

CHAPTER 3 Analysis

Sample Weights

The sample weights constructed for the survey analysis have three components: base weights, which account for unequal sampling rates in different branches of service; non-response adjustments, which account for unequal response rates in different demographic groups; and post stratification adjustments, which ensure that the weighted sample replicates the population size in each stratum. The construction of each component and the final weights are described below.

Base Weights

The sample was stratified by branch of service, with approximately equal numbers sampled in each service. However, the four branches of service are not equally represented in the state of California, resulting in unequal probabilities of selection. The base weight was defined as the inverse of the probability of selection, or sampling rate, in each stratum. Base weights for each stratum are listed in Table 3-1.

Table 3-1
Base Weights

Stratum (Branch of Service)	Population size (DEERS 2003)	Sample Size	Sampling Rate	Base Weight
Air Force	24,555	4,076	16.6%	6.0
Army	18,983	4,024	21.2%	4.7
Marine Corps	48,934	4,192	8.6%	11.7
Navy	63,930	4,152	6.5%	15.4

The base weights indicate, for example, that each person selected from the Army represented almost five people in the population, while each person selected from the Navy represented more than 15 people in the population.

Non-Response Adjustment

Demographic data were available for the full sample (respondents and non-respondents) for the following characteristics: age, sex, race/ethnicity, service, rank, marital status, duty status, and region. Response rates were calculated for each demographic group, and are presented in Table 3-2.

Because of the variability in response rates, the demographic characteristics of the respondents are not representative of the initial sample. A logistic regression model was constructed to estimate the probability of response for each individual in the sample based on these demographic characteristics. The final model, which included main effects for each demographic characteristic plus all significant two-way interactions among these variables, is described in Table 3-3. The Hosmer-Lemeshow statistic for this model indicated no significant lack of fit (chi square = 9.51, df = 8, p = 0.30). A response probability was calculated for each respondent from the estimated logistic regression equation. Non-response weights were calculated as the inverse of the estimated probability of selection, and ranged from 1.6 to 30.0 with a mean of 5.8.

Table 3-2
Response Rates by Demographic Characteristics

Characteristic	Number Selected *	Number of Responses	Response rate (%)
Age (years)			
18-34	12,274	1,729	14.1
35-44	3,320	806	24.3
45 and over	848	290	34.2
Sex			
Female	2,336	514	22.0
Male	14,107	2,311	16.4
Race/ethnicity			
American Indian/Alaskan native	210	28	13.3
Asian/Pacific islander	1,389	267	19.2
Black non-Hispanic	2,097	274	13.1
Hispanic	2,372	302	12.7
White non-Hispanic	10,022	1,880	18.8
Other	278	65	23.4
Unknown	75	9	12.0
Service			
Air Force	4,075	893	21.9
Army	4,024	688	17.1
Marine Corps	4,192	487	11.6
Navy	4,152	757	18.2
Rank			
Junior Enlisted	4,127	424	10.3
Senior Enlisted	9,813	1,630	16.6
Junior Officer	1,453	418	28.8
Senior Officer	902	316	35.0
Warrant Officer	140	37	26.4
Marital status			
Ever married	9,449	1,829	19.4
Never married	6,994	996	14.2
Region			
Region 9	11,717	1,887	16.1
Region 10	4,726	938	19.9
Duty status			
Active Duty	13,527	2,209	16.3
National Guard/Reserve	2,916	616	21.1

*Number selected includes non-deliverable surveys

Table 3-3 Logistic Regression Model for Non-Response

Variable	Value	Estimate	Standard Error	Wald Chi Square	P value
Intercept		1.643	0.302	29.566	0.000
Duty status	National Guard/Reserve	-0.128	0.061	4.440	0.035
	Active Duty (ref)				
Branch of service	Air Force	-0.419	0.141	8.886	0.003
	Army	0.234	0.141	2.754	0.097
	Marine Corps	0.091	0.175	0.269	0.604
	Navy (ref)				
Rank	Junior enlisted	0.103	0.420	0.060	0.806
	Senior enlisted	1.480	0.309	23.009	0.000
	Junior officer	-0.999	0.417	5.742	0.017
	Senior officer	-0.027	0.504	0.003	0.957
	Warrant officer (ref)				
Age	(years)	-0.010	0.008	1.522	0.217
Sex	Female	-0.221	0.029	56.591	0.000
Race	American Indian	0.071	0.204	0.120	0.729
	Asian	-0.324	0.091	12.739	0.000
	Black	0.184	0.085	4.745	0.029
	Other	-0.143	0.095	2.248	0.134
	Unknown	0.445	0.231	3.690	0.055
	White (ref)				
Marital status	Ever married	0.035	0.030	1.410	0.235
	Never married (ref)				
Region	Region 10	-0.144	0.060	5.696	0.017
Hispanic ethnicity	Non-Hispanic	-0.092	0.038	5.948	0.015
	Hispanic (ref)				
Duty status * rank	Junior enlisted	-0.095	0.086	1.224	0.269
	Senior enlisted	0.097	0.065	2.220	0.136
	Junior officer	0.126	0.090	1.941	0.164
	Senior officer	0.267	0.089	9.076	0.003
	Warrant officer (ref)				
Age * branch of service	Air Force	0.009	0.004	4.757	0.029
	Army	-0.004	0.004	0.987	0.320
	Marine Corps	-0.003	0.006	0.287	0.592
	Navy (ref)				
Service * region	Air Force	0.128	0.042	9.158	0.002
	Army	-0.054	0.044	1.499	0.221
	Marine Corps	-0.146	0.074	3.910	0.048
	Navy (ref)				
Age * rank	Junior enlisted	0.020	0.016	1.682	0.195
	Senior enlisted	-0.036	0.008	20.058	0.000
	Junior officer	0.022	0.012	3.291	0.070
	Senior officer	-0.008	0.012	0.436	0.509
	Warrant officer (ref)				
Region * rank	Junior enlisted	-0.198	0.071	7.712	0.005
	Senior enlisted	0.142	0.062	5.320	0.021
	Junior officer	-0.039	0.076	0.264	0.608
	Senior officer	0.184	0.082	4.991	0.025
	Warrant officer (ref)				
Sex * marital status	Female, ever married	-0.055	0.029	3.606	0.058

Post-Stratification

At the final stage, weights were adjusted to force the sum of the weights in each stratum to match the population total for each stratum. Post stratification adjustment factors are shown in Table 3-4.

Table 3-4
Post-Stratification Adjustment Factors

Branch of Service	Sum of Weights before Post Stratification Adjustment	Post Stratification Adjustment Factor	Final Sum of Weights
Air Force	24,317	1.010	24,555
Army	19,336	0.982	18,983
Marine Corps	47,994	1.020	48,934
Navy	64,190	0.996	63,930

Final Weights

Final weights were calculated as the product of the base weight, non-response weight, and post stratification adjustment factor. These weights ranged from 7.6 to 350 with a mean of 55. After weighting, the demographics of the sample closely approximate the population demographics as indicated in Table 3-5.

Table 3-5
Weighted Sample Characteristics

	Demographic Characteristic	Population Total (DEERS)	Survey Total (weighted)
Total	Total	156,402	156,402
Age	18-34	119,734	119,389
	35-44	30,185	29,987
	45+	6,472	7,026
Sex	Female	20,765	20,509
	Male	135,636	135,893
Race	American Indian/Alaskan Native	2,533	2,303
	Asian/Pacific Islander	13,550	15,222
	Black non-Hispanic	19,851	20,830
	Hispanic	23,629	22,638
	White non-Hispanic	93,878	91,914
	Other/Unknown	2,784	3,495
Service	Air Force	24,555	24,555
	Army	18,983	18,983
	Marine Corps	48,934	48,934
	Navy	63,930	63,930
Rank	Junior Enlisted	39,014	36,862
	Senior Enlisted	94,638	96,987
	Junior Officer	13,229	13,449
	Senior Officer	8,241	8,065
	Warrant Officer	1,195	1,039

Data Analysis

Data were tabulated using SAS® version 8.0 for Windows. Survey procedures were used to account for weighting and stratification. SAS® uses the Taylor series expansion method to estimate sampling errors of estimators based on complex sample designs. Frequency tables were generated for each questionnaire item, and key items were tabulated by gender, age, education, ethnicity, rank, and smoking status.

In addition, findings from the active duty military population were compared to data obtained from the 2003 CATS for the California general population. Prevalence for selected items was calculated from the two surveys, along with appropriate standard errors, and z statistics were used to test for statistical significance at the 5% level.

Since the active duty military population is disproportionately young and male, the report includes comparisons with the California general population stratified by age and sex. To obtain age- and sex- adjusted overall comparisons, the results for the active duty military personnel were directly adjusted to match the 1990 California general population totals in three age categories (18-24, 25-44, and 45+ years) and two gender categories. The adjusted prevalence was calculated as follows:

$$\sum_{ij} p_{ij} w_{ij}$$

where

p_{ij} = prevalence among persons of sex i and age category j in the sample

w_{ij} = (number of persons in the California general population sex i in age category j) / (total number of persons in the 1990 California general population).

Since the 2003 CATS is already weighted to match this population, the adjustment to the active duty survey allows for direct comparison to the results for the California general population.

Note: The following chapters present the analytic results of tobacco habits of the California active duty personnel (Chapter 4), a comparison of tobacco habits between the California active duty and overall California population (Chapter 5), and analysis of the tobacco habits of active duty 18 to 24 year old males and their California counterparts (Chapter 6).

CHAPTER 4 California Active Duty Population Survey Results

I. Tobacco Use

Tobacco Use Behavior

Almost one-third (31.1% [28.9, 33.5]) of California active duty military personnel reported using at least one kind of tobacco product. Of these, 13.7% (12.0, 15.43) smoked cigarettes only, 8% (6.6, 9.6%) smoked cigarettes and used at least one other tobacco product, and 9.5% (8.2, 11.1%) did not smoke cigarettes but used another tobacco product.

Smoking Prevalence

Approximately one out of five (21.6% [19.5, 23.7]) respondents reported that they currently smoked cigarettes, either with or without using other tobacco products. Smoking prevalence among males was slightly higher than females. Personnel ages 18-24 smoked at a rate (31.9% [27.8, 36.1]) over twice that of any other age group. The smoking rate among ethnic groups was highest among the white, non-Hispanic group (26.1% [23.3, 28.9]), and was significantly higher than any other ethnic group.

Note: Technically, the next largest measurable ethnic “group” accounted for 12% of the total active duty population. This cluster was made up of five separate heterogeneous ethnic groups, each of which was too small to be studied separately. This group, referred to as “Other” in tables, was not included in the analyses but the responses of patients in this group were included in the total response reports.

Personnel with high school and technical school educational levels (31.2%) and of junior enlisted grades (51.9%) had smoking rates significantly higher than the rest of the population. Marine Corps members had smoking rates 33% higher than those of the Navy, and 50% higher than those of the Army and Air Force. These results are displayed in Table 4-1.

Number of Cigarettes Smoked Per Day

The average number of cigarettes smoked per day was 13.7 (12.7, 14.6), with males reporting slightly higher daily cigarette consumption than females. Older personnel, senior officers, warrant officers, and senior enlisted respondents reported smoking more cigarettes per day than younger, junior enlisted smokers. Thus while younger and more junior personnel reported higher smoking rates, older and more senior personnel smoked more cigarettes per day. Respondents over age 45 reported smoking 18.2 (15.3 - 21.2) cigarettes per day, whereas respondents between 18-24 years of age reported smoking 12.9 (11.5 - 14.3) cigarettes per day.

Following the same pattern as smoking prevalence, white non-Hispanic respondents reported smoking the largest number of cigarettes per day, 14.9 (13.8 – 16.0). Of interest, there was little variation among the services in the number of cigarettes smoked per day. Table 4-2 displays these results.

Table 4-1
Smoking Prevalence California Active Duty Personnel

Demographic Characteristics		Smoking Prevalence	95% CI
Total		21.6%	19.5 - 23.7%
Gender			
	Female	18.4%	14.1 - 22.7%
	Male	22.1%	19.7 - 24.4%
Age			
	18-24	31.9%	27.8 - 36.1%
	25-44	14.9%	12.8 - 17.0%
	45+	9.4%	5.3 - 13.5%
Race/Ethnicity			
	Hispanic	14.3%	9.0 - 19.7%
	White non-Hispanic	26.1%	23.3 - 28.8%
	African American	10.6%	5.9 - 15.3%
	Other	20.8%	15.1 - 26.4%
Education level			
	High School or less	30.9%	26.1 - 35.6%
	Technical school	32.6%	22.5 - 42.6%
	Some college	21.0%	17.6 - 24.4%
	College degree	10.8%	7.9 - 13.8%
	Post graduate	5.0%	2.4 - 7.5%
Branch of Service			
	Air Force	17.5%	14.7 - 20.4%
	Army	17.8%	14.4 - 21.3%
	Marine Corps	26.9%	22.3 - 31.5%
	Navy	20.2%	16.8 - 23.5%
Rank			
	Junior Enlisted	29.5%	23.9 - 35.1%
	Senior Enlisted	22.4%	19.8 - 25.0%
	Junior Officer	6.6%	3.8 - 9.4%
	Senior Officer	2.0%	0.2 - 3.8%
	Warrant Officer	15.7%	0.0 - 34.4%

Note: CI = confidence interval

Table 4-2
Number of Cigarettes Smoked Per Day California Active Duty Personnel

Demographic Characteristics		Smoking Prevalence	95% CI
Total		13.7%	12.7 - 14.6%
Sex			
	Female	13.0%	10.8 - 15.2%
	Male	13.7%	12.7 - 14.8%
Age			
	18-24	12.9%	11.5 - 14.3%
	25-44	14.5%	13.3 - 15.7%
	45+	18.2%	15.3 - 21.2%
Race/Ethnicity			
	Hispanic	13.4%	10.2 - 16.7%
	White non-Hispanic	14.9%	13.8 - 16.0%
	African American	10.3%	7.1 - 13.5%
	Other	8.4%	6.7 - 10.2%
Education level			
	High School or less	13.3%	11.7 - 15.0%
	Technical school	13.6%	10.7 - 16.4%
	Some college	13.4%	11.9 - 14.9%
	College degree	13.8%	11.3 - 16.2%
	Post graduate	20.5%	11.6 - 29.5%
Branch of Service			
	Air Force	13.5%	11.7 - 15.2%
	Army	14.1%	12.0 - 16.1%
	Marine Corps	14.3%	12.4 - 16.2%
	Navy	13.0%	11.45 - 14.6%
Rank			
	Junior Enlisted	12.8%	10.8 - 14.7%
	Senior Enlisted	14.1%	13.0 - 15.2%
	Junior Officer	10.7%	6.1 - 15.3%
	Senior Officer	15.1%	8.7 - 21.4%
	Warrant Officer	22.9%	19.5 - 26.3%

Note: CI = confidence interval

Other Tobacco Use Behaviors

Slightly more than one-sixth (17.5% [15.5-19.31%]) of respondents reported the use of other tobacco products (cigars, pipe, chewing tobacco and/or snuff) -- slightly over half of these (9.5%) reporting the use of other tobacco products alone (without

concomitant cigarette use). Cigars (7.1%) and snuff (3.9%) were the most common products used, followed by chewing tobacco (0.8%) and pipes (0.4%). More than three times as many males (19.1% [17.0-21.3%]) reported the use of other tobacco products as females (5.9% [3.2-8.6%]).

Younger, white non-Hispanic respondents with lower educational levels reported higher usage rates. Over one quarter (26% [21.5-30.6%]) of Marine Corps personnel reported using at least one of these other tobacco products; this rate was significantly higher statistically than that reported from the other services. Warrant officers reported the highest usage (24.1% [5.2-43.1%]), followed by junior enlisted personnel (18.3% [15.8-20.7%]). These results are displayed in Table 4-3.

Table 4-3
Other Tobacco Use Behaviors California Active Duty Personnel

Demographic Characteristics		Smoking Prevalence	95% CI
Total		17.4%	15.5 - 19.3%
Sex	Female	5.9%	3.2 - 8.6%
	Male	19.1%	17.0 - 21.29%
Age	18-24	21.6%	17.9 - 25.4%
	25-44	14.8%	12.7 - 16.9%
	45+	10.7%	6.5 - 15.0%
Race/Ethnicity	Hispanic	12.3%	7.4 - 17.3%
	White non-Hispanic	20.7%	18.2 - 23.3%
	African American	14.1%	8.5 - 19.8%
	Other	11.5%	6.9 - 16.1%
Education level	High School or less	24.7%	20.2 - 29.1%
	Technical school	23.7%	13.7 - 33.7%
	Some college	14.8%	11.8 - 17.7%
	College degree	12.0%	8.9 - 15.0%
	Post graduate	9.3%	5.8 - 12.7%
Branch of Service	Air Force	9.9%	7.7 - 12.1%
	Army	15.8%	12.6 - 19.0%
	Marine Corps	26.0%	21.5 - 30.6%
	Navy	14.1%	11.3 - 16.9%
Rank	Junior Enlisted	22.0%	16.8 - 27.2%
	Senior Enlisted	16.5%	14.2 - 18.8%
	Junior Officer	14.2%	10.0 - 18.3%
	Senior Officer	11.1%	7.1 - 15.1%
	Warrant Officer	24.1%	5.2 - 43.1%
Smoking status	Current nonsmoker	12.2%	10.4 - 14.0%
	Current smoker	36.8%	31.3 - 42.4%

Note: CI = confidence interval

These results were somewhat different than those noted in the 2002 DoD Survey of Health Related Behaviors. This DoD-wide survey reported that, in 2002, the prevalence of cigar smoking in the entire military population was over three times higher (32.6%) than the California active duty population, and the prevalence of pipe smoking was four times higher (4.2%).

The California active duty population reported a snuff use of 8.6% (7.1, 10.1%) and chewing tobacco use of 5.2% (3.9, 6.5%) compared with 19.4% use of both products reported by the national military population. Similarly, in both reports, the Marine Corps reported a higher use of other tobacco products compared to the other military services. Other tobacco use results are displayed in Table 4-4.

Table 4-4
Tobacco Use Behavior California and National Active Duty Personnel

	CADT	95% CI	DoD Risk Behavior Survey
Cigarette	31.1%		33.8%
Cigar	9.0%	15.5 - 19.3%	32.6%
Pipe	1.1%	0.6 - 1.6%	4.2%
Snuff	8.6%	7.1 - 10.1%	NA
Chewing tobacco	5.2%	3.9 - 6.5%	19.4%

Note: CI = confidence interval

II. Tobacco Exposure

Smoke-Free Workplace

The overwhelming majority of active duty respondents, 96.3% (95.3, 97.4%), reported that their workplaces were smoke free. All subpopulations were consistent in their response rates. This may reflect the military's global smoke-free workplace policy, and its strict enforcement. These results are displayed in Table 4-5.

Table 4-5
Smoke-free Workplaces California Active Duty Personnel

Demographic Characteristics		Smoking Prevalence	95% CI
Total		96.3%	95.2 - 97.3%
Sex	Female	98.2%	96.5 - 99.7%
	Male	96.1%	94.8 - 97.2%
Age	18-24	94.6%	92.3 - 96.8%
	25-44	97.5%	96.6 - 98.4%
	45+	97.7%	95.5 - 99.8%
Race/Ethnicity	Hispanic	94.1%	90.0 - 98.0%
	Non-Hispanic White	97.4%	96.2 - 98.4%
	African American	95.2%	91.8 - 98.5%
	Other	95.4%	92.5 - 98.1%
Education level	High School or less	95.5%	93.2 - 97.6%
	Technical school	95.3%	89.3 - 100.0%
	Some college	96.4%	94.5 - 98.2%
	College degree	97.6%	95.9 - 99.2%
	Post graduate	97.4%	95.1 - 99.6%
Branch of Service	Air Force	98.5%	97.5 - 99.5%
	Army	95.4%	93.2 - 97.5%
	Marine Corps	94.9%	92.2 - 97.4%
	Navy	96.9%	95.4 - 98.3%
Rank	Junior Enlisted	93.9%	90.8 - 96.9%
	Senior Enlisted	96.7%	95.4 - 97.9%
	Junior Officer	98.3%	96.6 - 99.8%
	Senior Officer	99.6%	99.1 - 100.1%
	Warrant Officer	100.0%	
Smoking status	Current nonsmoker	96.5%	95.3 - 97.6%
	Current smoker	95.8%	93.0 - 98.5%

Note: CI=confidence interval

Smoking in the Home

Only 8.5% (7.2-10.0%) of respondents reported that smoking occurred inside their homes. However, significantly higher rates of smoking in the home were reported by younger (11% [8.3, 13.6%]), less educated (12.3% [9.1, 15.6%]), junior enlisted (11.1% [7.5, 14.8%]), Army (13.3% [9.9, 16, 7%]) personnel. This brings into question the possibility that smoke-free policies are not stringently adhered to in Army junior enlisted barracks environments. These results are displayed in Table 4-6.

Table 4-6
Smoking in the Home California Active Duty Personnel

Demographic Characteristics		Smoking Prevalence	95% CI
Total		8.6%	7.2 - 10.0%
Sex			
	Female	7.5%	4.5 - 10.6%
	Male	8.7%	7.2 - 10.3%
Age			
	18-24	10.9%	8.3 - 13.6%
	25-44	6.8%	5.2 - 8.4%
	45+	8.4%	4.3 - 12.5%
Race/Ethnicity			
	Hispanic	6.7%	3.2 - 10.2%
	White non-Hispanic	9.1%	7.3 - 11.0%
	African American	9.6%	5.3 - 13.3%
	Other	7.1%	3.5 - 10.7%
Education level			
	High School or less	12.3%	9.1 - 15.6%
	Technical school	12.1%	5.1 - 19.0%
	Some college	8.5%	6.2 - 10.7%
	College degree	4.2%	2.3 - 6.2%
	Post graduate	3.3%	1.2 - 5.5%
Branch of Service			
	Air Force	7.0%	5.0 - 9.1%
	Army	13.3%	9.9 - 16.7%
	Marine Corps	9.3%	6.3 - 12.4%
	Navy	7.2%	5.0 - 9.4%
Rank			
	Junior Enlisted	11.1%	7.5 - 14.8%
	Senior Enlisted	8.9%	7.2 - 10.6%
	Junior Officer	3.0%	0.8 - 5.1%
	Senior Officer	2.0%	0.5 - 3.5%
	Warrant Officer	10.1%	0.0 - 23.0%
Smoking status			
	Current nonsmoker	4.1%	3.0 - 5.1%
	Current smoker	24.6%	19.7 - 29.5%

Note: CI = confidence interval

Exposure to Smoke Outside the Home or Work

Respondents reported exposure to secondary smoke in places other than their homes or workplaces 43.3% (40.9, 45.7%) of the time. This type of exposure was reported by 55.4% (51.0, 59.8%) of younger and 55.7% (49.6 - 61.8%) of junior enlisted respondents in the Marine Corps (49% [44.0 - 54.1%]) and Army (48% [43.5 - 52.4%]), with no difference between genders and little difference among ethnicities. This finding may represent social activities and behaviors of respondents in these demographic groups. These results are displayed in Table 4-7.

Table 4-7

Exposure to Smoke Outside the Home or Workplace California Active Duty Population

Demographic Characteristics		Smoking Prevalence	95% CI
Total		43.3%	40.9 - 45.7%
Sex	Female	43.7%	38.1 - 49.3%
	Male	43.3%	40.6 - 45.9%
Age	18-24	55.4%	51.0 - 59.8%
	25-44	35.2%	32.4 - 38.0%
	45+	33.0%	26.4 - 39.6%
Race/Ethnicity	Hispanic	48.7%	41.6 - 55.7%
	White non-Hispanic	40.6%	37.7 - 43.6%
	African American	49.3%	41.7 - 56.9%
	Other	43.6%	36.9 - 50.3%
Education level	High School or less	49.4%	44.3 - 54.5%
	Technical school	47.9%	37.6 - 58.2%
	Some college	46.3%	42.4 - 50.3%
	College degree	32.4%	27.5 - 37.3%
	Post graduate	20.9%	15.4 - 26.5%
Branch of Service	Air Force	36.7%	33.2 - 40.2%
	Army	48.0%	43.5 - 52.4%
	Marine Corps	49.0%	44.0 - 54.1%
	Navy	40.1%	36.0 - 44.1%
Rank	Junior Enlisted	55.7%	49.6 - 61.8%
	Senior Enlisted	43.6%	40.7 - 46.6%
	Junior Officer	24.4%	19.6 - 29.3%
	Senior Officer	16.6%	12.1 - 21.1%
	Warrant Officer	27.5%	7.0 - 48.0%
Smoking status	Current nonsmoker	39.5%	36.8 - 42.2%
	Current smoker	57.1%	51.5 - 62.7%

Note: CI = confidence interval

III. Anti-Tobacco Campaign Exposure

This section discusses the relative efficacy of alternative approaches of providing anti-tobacco information to active duty military personnel.

General

About two-thirds (64.6% [62.7, 67%]) of respondents reported seeing or hearing an anti-tobacco message within the past 30 days. Little variation in awareness of anti-tobacco advertisements was seen across genders, ethnicities, rank, or branches of service. However, as noted in the following discussion, there were differences reported among the various media approaches. This data is shown in Table 4-8.

Table 4-8
Exposure to Anti-Tobacco Messages California Active Duty Personnel

Demographic Characteristics		Smoking Prevalence	95% CI
Total		64.6%	62.3 - 67.0%
Sex			
	Female	62.8%	57.5 - 68.2%
	Male	64.9%	62.3 - 67.5%
Age			
	18-24	66.8%	62.5 - 71.1%
	25-44	63.1%	60.3 - 65.9%
	45+	63.3%	56.7 - 70.0%
Race/Ethnicity			
	Hispanic	60.8%	53.8 - 67.8%
	White non-Hispanic	66.6%	63.8 - 69.4%
	African American	63.6%	56.2 - 71.0%
	Other	61.4%	55.1 - 67.7%
Education level			
	High School or less	63.4%	58.4 - 68.4%
	Technical school	66.3%	56.1 - 76.5%
	Some college	64.9%	61.1 - 68.8%
	College degree	64.3%	59.6 - 68.9%
	Post graduate	62.8%	56.7 - 68.9%
Branch of Service			
	Air Force	63.9%	60.4 - 67.3%
	Army	63.0%	58.7 - 67.3%
	Marine Corps	66.5%	61.7 - 71.3%
	Navy	64.0%	60.0 - 67.9%
Rank			
	Junior Enlisted	61.0%	54.9 - 67.1%
	Senior Enlisted	65.3%	62.5 - 68.1%
	Junior Officer	67.7%	62.5 - 72.9%
	Senior Officer	66.0%	60.0 - 72.0%
	Warrant Officer	77.9%	61.6 - 94.2%
Smoking status			
	Current nonsmoker	63.4%	60.8 - 66.0%
	Current smoker	70.2%	65.0 - 75.5%

Note: CI = confidence interval

Television

Almost all respondents 96.8% (95.8, 97.8%) reported seeing or hearing anti-tobacco messages on television. This was the highest response of all media alternatives. In addition, there was virtually no variation among genders, ages, branch of service, or rank in this variable. These results are displayed in Table 4-9.

Table 4-9
Television Anti-Tobacco Messages California Active Duty Personnel

Demographic Characteristics		Smoking Prevalence	95% CI
Total		96.8%	95.8 - 97.8%
Sex			
	Female	96.0%	93.7 - 98.3%
	Male	97.0%	95.9 - 98.1%
Age			
	17-24	96.8%	94.9 - 98.7%
	25-44	96.9%	95.8 - 98.0%
	45+	96.3%	93.3 - 99.4%
Race/Ethnicity			
	Hispanic	97.3%	94.4 - 100.0%
	White non-Hispanic	96.2%	94.8 - 97.6%
	African American	97.6%	95.2% - 100.0%
	Other	98.8%	97.5 - 100.0%
Education level			
	High School or less	97.2%	95.1 - 99.2%
	Technical school	98.3%	94.9 - 100.0%
	Some college	97.3%	95.7 - 98.9%
	College degree	95.4%	92.5 - 98.4%
	Post graduate	93.7%	90.6 - 96.7%
Branch of Service			
	Air Force	96.4%	94.8 - 98.1%
	Army	94.8%	92.2 - 97.5%
	Marine Corps	97.8%	96.2 - 99.3%
	Navy	96.8%	94.9 - 98.7%
Rank			
	Junior Enlisted	96.3%	93.5 - 99.2%
	Senior Enlisted	97.6%	96.4 - 98.7%
	Junior Officer	97.2%	95.1 - 99.3%
	Senior Officer	90.4%	85.5 - 95.3%
	Warrant Officer	88.6%	72.2 - 100.0%
Smoking status			
	Current nonsmoker	96.7%	95.5 - 97.7%
	Current smoker	97.2%	95.3 - 99.2%

Note: CI = confidence interval

Radio

In contrast, only 60% (56.7, 63.2%) of respondents reported hearing anti-tobacco information on the radio. Again, little variation across demographics was noted. These results are shown in Table 4-10.

Table 4-10
Radio Anti-Tobacco Messages California Active Duty Personnel

Demographic Characteristics		Smoking Prevalence	95% CI
Total		60.0%	56.7 - 63.2%
Sex			
	Female	56.8%	49.2 - 64.4%
	Male	60.4%	56.9 - 63.9%
Age			
	18-24	59.9%	54.2 - 65.6%
	25-44	60.0%	56.1 - 63.9%
	45+	59.1%	49.5 - 68.7%
Race/Ethnicity			
	Hispanic	61.1%	51.3 - 70.9%
	White non-Hispanic	58.0%	54.1 - 61.9%
	African American	59.6%	49.2 - 70.0%
	Other	68.7%	60.3 - 77.0%
Education level			
	High School or less	60.3%	53.6 - 67.0%
	Technical school	71.3%	59.6 - 83.0%
	Some college	59.4%	54.1 - 64.6%
	College degree	57.9%	50.8 - 65.0%
	Post graduate	54.7%	47.1 - 62.3%
Branch of Service			
	Air Force	55.0%	50.0 - 59.9%
	Army	63.3%	57.5 - 69.1%
	Marine Corps	59.3%	52.5 - 66.0%
	Navy	61.4%	56.0 - 66.8%
Rank			
	Junior Enlisted	54.6%	46.1 - 63.1%
	Senior Enlisted	63.2%	59.3 - 67.1%
	Junior Officer	54.3%	46.8 - 61.8%
	Senior Officer	53.0%	44.1 - 62.0%
	Warrant Officer	43.0%	16.0 - 69.9%
Smoking status			
	Current nonsmoker	56.2%	52.5 - 59.9%
	Current smoker	71.4%	65.3 - 77.6%

Note: CI = confidence interval

Billboards

Similarly, 66.6% (63.6, 69.7%) of respondents reported seeing anti-tobacco messages on billboards, with little variation across population demographics in this finding. These results are shown in Table 4-11.

Table 4-11

Billboard Anti-Tobacco Messages California Active Duty Personnel

Demographic Characteristics		Smoking Prevalence	95% CI
Total		66.6%	63.6 - 69.7%
Sex			
	Female	63.0%	55.4 - 70.6%
	Male	67.1%	63.8 - 70.5%
Age			
	17-24	69.2%	63.8 - 74.5%
	25-44	64.3%	60.6 - 68.1%
	45+	70.8%	62.4 - 79.4%
Race/Ethnicity			
	Hispanic	68.5%	59.3 - 77.7%
	White non-Hispanic	65.4%	61.7 - 69.1%
	African American	64.7%	54.7 - 74.6%
	Other	72.5%	64.6 - 80.4%
Education level			
	High School or less	65.7%	59.3 - 72.2%
	Technical school	68.7%	56.5 - 80.9%
	Some college	67.1%	62.2 - 72.0%
	College degree	69.5%	62.8 - 76.2%
	Post graduate	59.2%	51.8 - 66.5%
Branch of Service			
	Air Force	65.5%	60.8 - 70.2%
	Army	65.5%	59.8 - 71.2%
	Marine Corps	67.7%	61.6 - 73.9%
	Navy	66.5%	61.4 - 71.7%
Rank			
	Junior Enlisted	70.6%	63.0 - 78.2%
	Senior Enlisted	65.6%	61.7 - 69.4%
	Junior Officer	68.3%	61.5 - 75.1%
	Senior Officer	60.7%	52.2 - 69.2%
	Warrant Officer	60.7%	34.2 - 87.2%
Smoking status			
	Current nonsmoker	64.7%	61.2 - 68.2%
	Current smoker	72.7%	66.7 - 78.8%

Note: CI = confidence interval

Newspapers

A smaller proportion of respondents (36.5% [33.2, 39.9%]) overall reported seeing anti-tobacco information in newspapers. However, slightly more than half (52.2% [42.1, 62.3%]) of respondents over age 45 answered yes to this question as opposed to 36.7% of those aged 25-44 and 34.9% of those aged 18-34. This difference was statistically significant. Navy respondents noted seeing this information in newspapers at a rate 14% higher than those in the Army and Marine Corps and 34% higher than those in the Air Force. These results are displayed in Table 4-12.

Table 4-12
Newspaper Anti-Tobacco Messages California Active Duty Personnel

Demographic Characteristics		Smoking Prevalence	95% CI
Total		36.5%	33.2 - 39.9%
Sex			
	Female	31.3%	23.7 - 38.9%
	Male	37.2%	33.6 - 40.8%
Age			
	17-24	34.9%	28.9 - 40.8%
	25-44	36.7%	32.7 - 40.7%
	45+	52.2*	42.1 - 62.3%
Race/Ethnicity			
	Hispanic	31.4%	21.6 - 41.2%
	White non-Hispanic	32.2%	28.3 - 36.0%
	African American	34.7%	24.2 - 45.3%
	Other	64.2%	55.3 - 73.1%
Education level			
	High School or less	36.6%	29.5 - 43.7%
	Technical school	35.6%	21.8 - 49.3%
	Some college	35.2%	29.9 - 40.5%
	College degree	38.9%	31.4 - 46.3%
	Post graduate	37.2%	29.4 - 45.0%
Branch of Service			
	Air Force	30.0%	25.2 - 34.7%
	Army	35.5%	29.3 - 41.6%
	Marine Corps	35.3%	28.5 - 42.1%
	Navy	40.3%	34.6 - 46.0%
Rank			
	Junior Enlisted	33.0%	24.5 - 41.5%
	Senior Enlisted	38.3%	34.1 - 42.5%
	Junior Officer	31.9%	24.4 - 39.3%
	Senior Officer	37.6%	28.6 - 46.6%
	Warrant Officer	23.7%	0.0 - 47.6%
Smoking status			
	Current nonsmoker	34.7%	31.0 - 38.3%
	Current smoker	42.1%	34.5 - 49.6%

Note: CI = confidence interval

* Statistically Significant

Other Sources

A smaller proportion (26.7% [23.4, 31.1%]) reported seeing anti-tobacco messages from other sources, such as magazines, the Internet, and posters at the military units and medical facilities. This is displayed in Table 4-13.

Table 4-13

Other Sources for Anti-Tobacco Information California Active Duty Personnel

Demographic Characteristics		Smoking Prevalence	95% CI
Total		26.7%	23.4 - 31.1%
Sex			
	Female	26.4%	17.0 - 35.8%
	Male	26.8%	21.9 - 31.6%
Age			
	17-24	29.8%	22.2 - 37.3%
	25-44	23.7%	18.6 - 28.8%
	45+	31.7%	17.1 - 46.2%
Race/Ethnicity			
	Hispanic	28.2%	16.3 - 40.2%
	White non-Hispanic	25.2%	20.1 - 30.4%
	African American	26.9%	11.2 - 42.5%
	Other	32.0%	19.2 - 44.9%
Education level			
	High School or less	25.8%	17.5 - 34.0%
	Technical school	25.1%	9.3 - 40.8%
	Some college	26.5%	19.4 - 33.6%
	College degree	31.4%	19.3 - 43.4%
	Post graduate	27.9%	17.8 - 37.9%
Branch of Service			
	Air Force	21.9%	15.5 - 28.4%
	Army	27.0%	19.3 - 34.6%
	Marine Corps	26.6%	17.9 - 35.3%
	Navy	28.4%	20.9 - 35.8%
Rank			
	Junior Enlisted	26.3%	15.9 - 36.6%
	Senior Enlisted	27.1%	21.7 - 32.5%
	Junior Officer	22.1%	12.8 - 31.5%
	Senior Officer	36.1%	22.3 - 49.8%
	Warrant Officer	12.1%	0.0 - 30.8%
Smoking status			
	Current nonsmoker	23.3%	18.5 - 28.0%
	Current smoker	37.3%	27.3 - 47.4%

Note: CI = confidence interval

IV. Knowledge and Attitudes

Tobacco Knowledge

CADT assessed eight areas of the active duty population's knowledge about tobacco. More than 90% of California active duty personnel were knowledgeable about the potential harm that pregnant mothers who smoke cause their unborn babies, as well as the potential harm of SHS to children, babies, and other non-smokers. Over 80% stated that tobacco companies can lower the nicotine levels of cigarettes, and disagreed with the statements that tobacco is not as addictive as heroin/cocaine, and that smoking five cigarettes per day ("light smoking") and not smoking carried the same risk for cancer. Conversely, 65.1% (62.7%, 67.5%) of respondents identified nicotine as a cause of cancer. These results are shown in Table 4-14.

Table 4-14
Tobacco Knowledge
California Active Duty Personnel

Tobacco Knowledge	Agree	95% CI
Smoking while pregnant harms her baby	97.8%	(97.1 - 98.5%)
SHS harms babies/children	97.7%	(97.0- 98.4%)
SHS causes cancer in non-smokers	90.8%	(89.5 - 92.2%)
Tobacco companies can lower nicotine content	83.3%	(83.3 - 85.2%)
Light smoker/non-smoker: same chance of cancer	17.4%	(15.5- 19.3%)
Tobacco not as addictive as heroin/cocaine	20.0%	(17.9- 22.0%)
Advertising encourages young to start smoking	69.4%	(67.2 - 71.7%)
Nicotine is a cause of cancer	65.1%	(62.7- 67.5%)

Note: CI = confidence interval

Tobacco Attitudes

CADT assessed 16 of the active duty population's attitudes about tobacco behavior. More than 90% agreed that:

- laws to prevent the sale of cigarettes to minors should be strongly enforced;
- cigarette packaging should have full disclosure of potentially harmful contents;
- they preferred eating in smoke-free restaurants; and
- tobacco spokespersons mislead the public when they say tobacco is not addictive.

Between 70 and 89.9 percent felt that:

- all indoor work sites should be smoke-free;
- minors should be fined for buying cigarettes;
- store owners should need licenses to sell cigarettes;
- the sale of cigarettes in vending machines should be prohibited;
- stronger warning labels should be required on tobacco products; and
- the distribution of free tobacco samples or coupons to obtain free samples by mail should not be permitted.

A smaller proportion of active duty personnel (40.0-69.9%) felt that:

- advertising tobacco products at sports and athletic events should be banned;
- tobacco products should be regulated as a drug by a government agency such as the Food and Drug Administration;
- the ban on cigarette advertising should be extended to all print and electronic media;
- the tobacco industry should not be permitted to offer products such as clothing or camping equipment in exchange for coupons on cigarette packs; and
- in the next century, the production and sale of cigarettes should not be a legitimate business in the U.S.

While 17.5% of them responded that smoking had a negative effect on their physical fitness, only 4.7% responded that smoking had a negative impact on their military readiness, and only 2.6% reported that smoking had a negative impact on their job performance (Table 4-15).

Table 4-15
Tobacco Attitudes California Active Duty Personnel

Tobacco Attitudes	Agree	95% CI
Enforce laws preventing cigarette sales to minors	97.5%	(96.7 - 98.2%)
Package needs disclosure of harmful contents	91.6%	(90.2 - 93.1%)
Prefer eating in smoke-free restaurant	91.5%	(90.1 - 92.9%)
Tobacco spokespersons mislead public saying tobacco not addictive	90.7%	(89.3 - 92.1%)
All indoor work sites should be smoke free	89.1%	(87.5 - 90.7%)
Minors who are caught buying cigarettes should be fined	84.2%	(82.4 - 86.0%)
Owners should need license to sell cigarettes	75.9%	(73.9 - 78.0%)
Prohibit cigarette vending machines	75.5%	(73.4 - 77.7%)
Stronger warning labels on tobacco products	74.1%	(72.1 - 76.2%)
Should not permit free tobacco samples or coupons	72.4%	(70.3 - 74.6%)
Ban cigarette advertising at sport events	66.1%	(63.8 - 68.4%)
Government should regulate tobacco products	65.4%	(63.1 - 67.6%)
Ban cigarette advertising on print media	63.3%	(61.0 - 65.6%)
Should not permit coupon exchange for products	50.5%	(48.1 - 52.9%)
Cigarette sales in U.S. should not be legal	46.0%	(43.6 - 48.4%)
Government exaggerates smoking risks	17.2%	(15.3 - 19.2%)
Tobacco use has a negative effect on my physical fitness	15.7%	NA
Smoking has a negative effect on my military readiness	4.7%	NA
Tobacco use has a negative effect on my job performance	2.6%	NA

Note: CI = confidence interval

CHAPTER 5

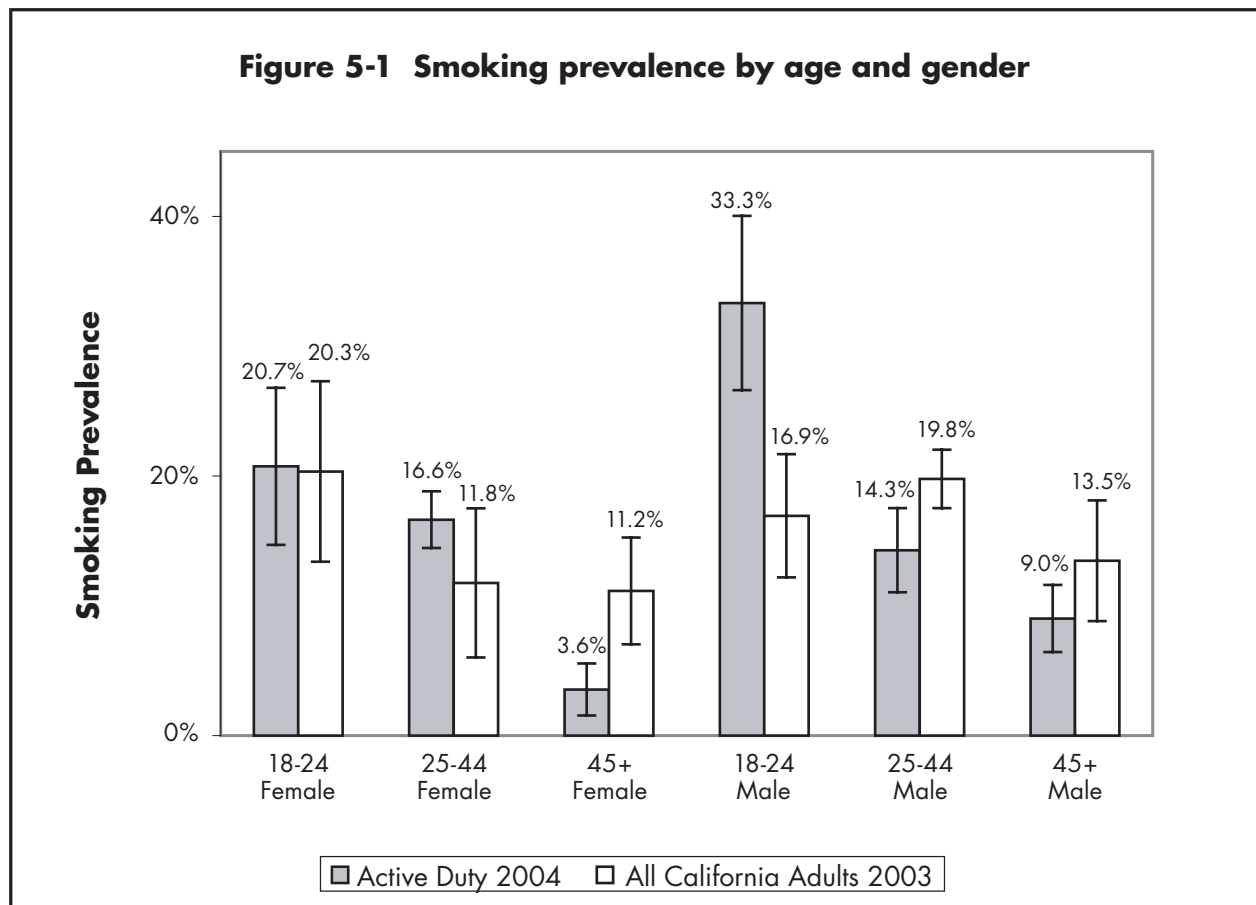
Comparison of Active Duty and California General Populations

I. Tobacco Use

This section compares the tobacco use behavior, knowledge, and attitude responses of the California active duty population to that of the general California population as described in the 2003 CATS results. Many of the two population's responses were similar. However, significant differences in tobacco use were noted: 1) smoking prevalence in two age/gender cohorts, and 2) other tobacco use in general.

Smoking Prevalence

Male active duty personnel age 18-24 and female active duty personnel over age 45, reported smoking rates that were significantly different statistically than comparable segments of the general California population. One-third (33.3%, [28.6, 38.1%]) of male military active duty personnel between the ages of 18-24 reported that they smoked, compared with a rate of 17% (10.2, 23.7%) among other California males of the same age range. Conversely, only 3.6% (-0.6, 7.7%) of female active duty personnel over the age of 45 reported that they smoked, compared with a rate of 11.2% (9.2, 13.2%) among other California females of the same age range. These results are displayed in Figure 5-1.



Other Tobacco Use Prevalence

Active duty personnel reported using other tobacco products at a statistically higher rate than did the general California population. Cigar, pipe, snuff, or chewing tobacco use was reported by 17.4% (19.3, 15.5%) of active duty personnel compared with 5.9% (4.9, 6.8%) of the general California population. As mentioned earlier in this report, cigars were reported to be used most often by active duty personnel (9.0% [7.6, 10.5%]), followed by snuff (8.6% [7.1, 10.1%]), chewing tobacco (5.2% [3.9, 6.5%]), and pipe (1.2% [0.7, 1.7%]). These results (except for pipe smoking) are all significantly higher than rates reported in the CATS instrument (cigar -4.4% [3.6, 5.2%], snuff -0.9%. These results are displayed in Figure 5-2.

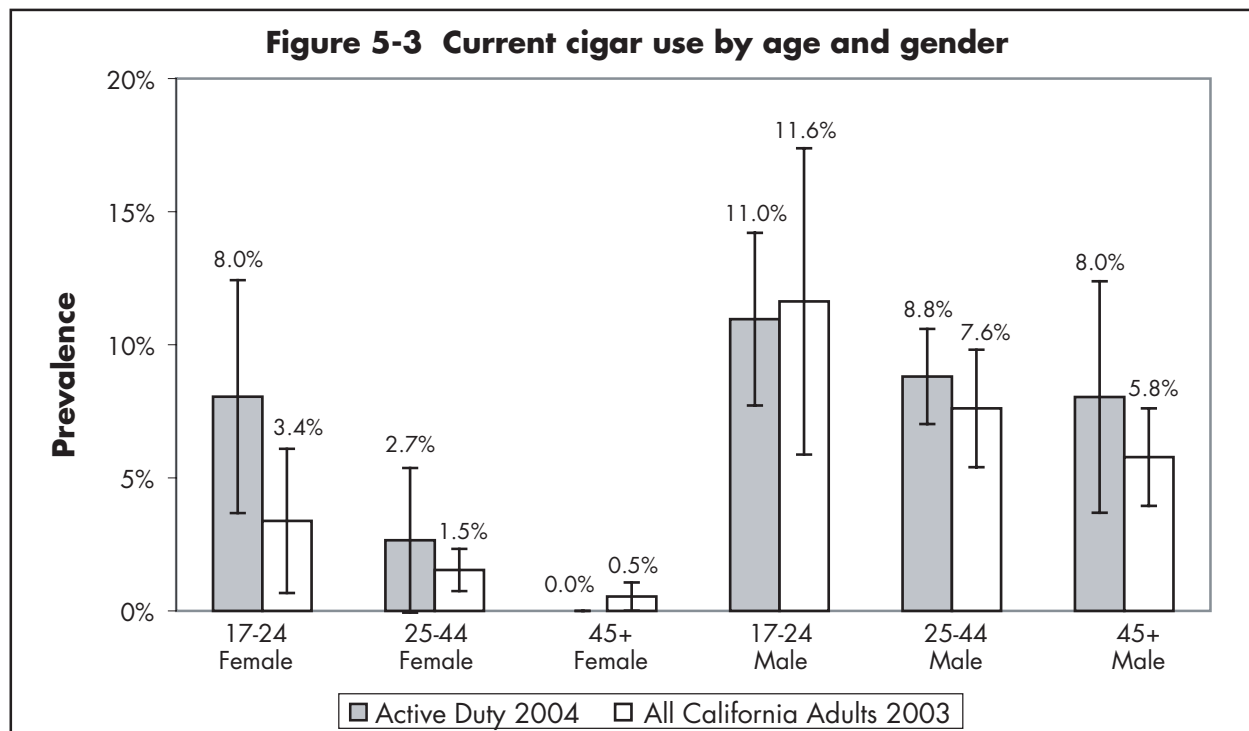
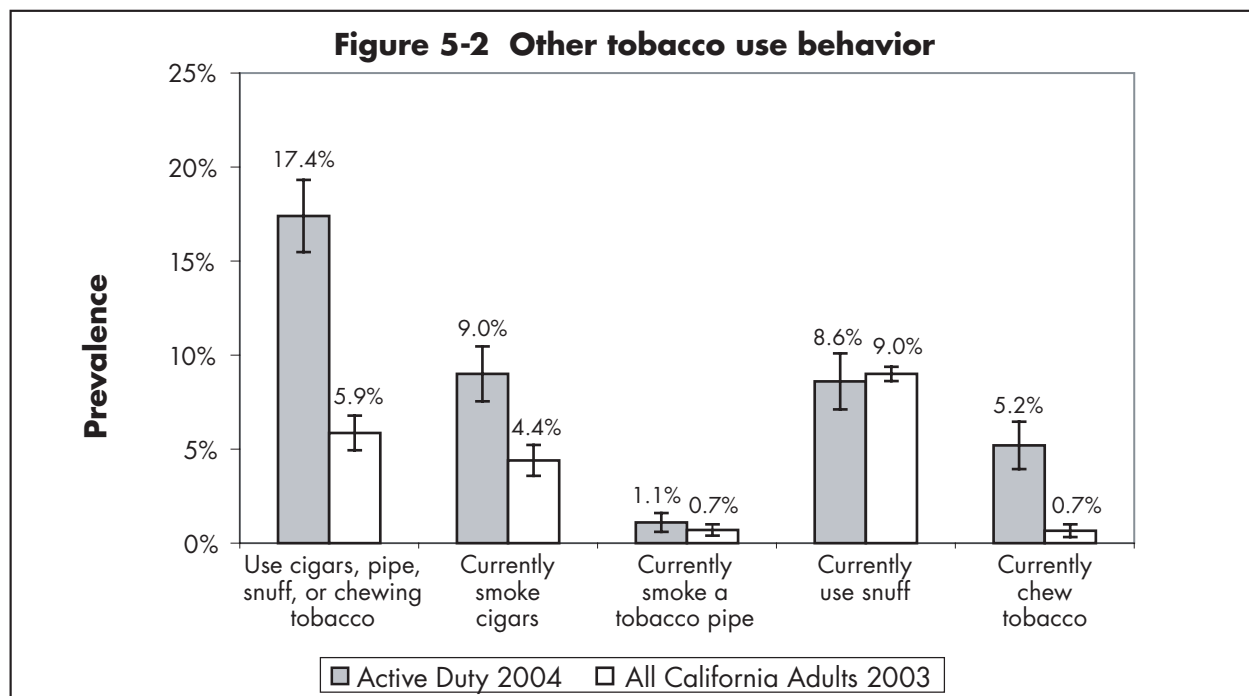


Figure 5-4 Current pipe use by age and gender

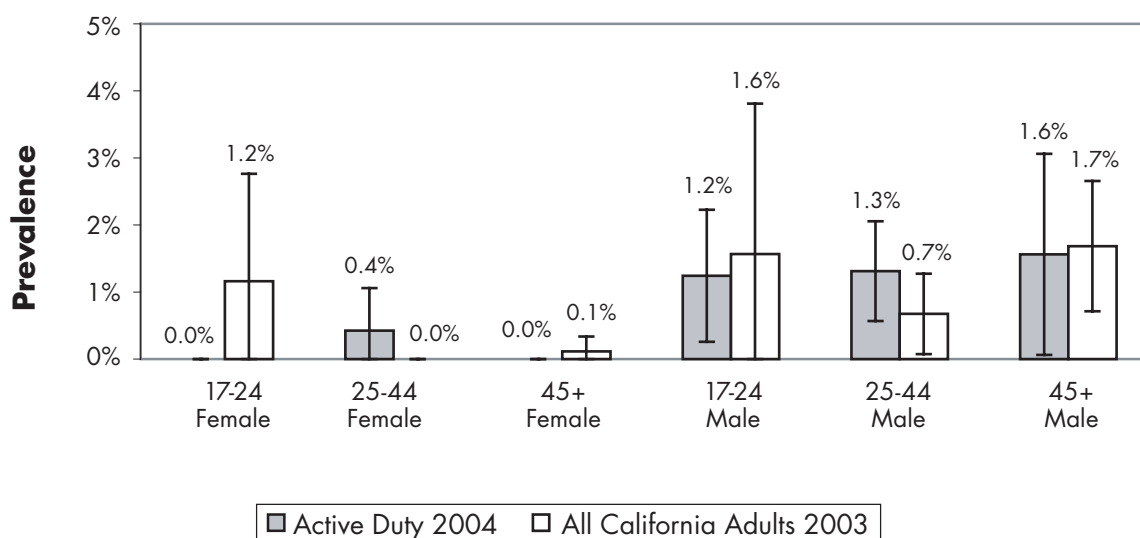
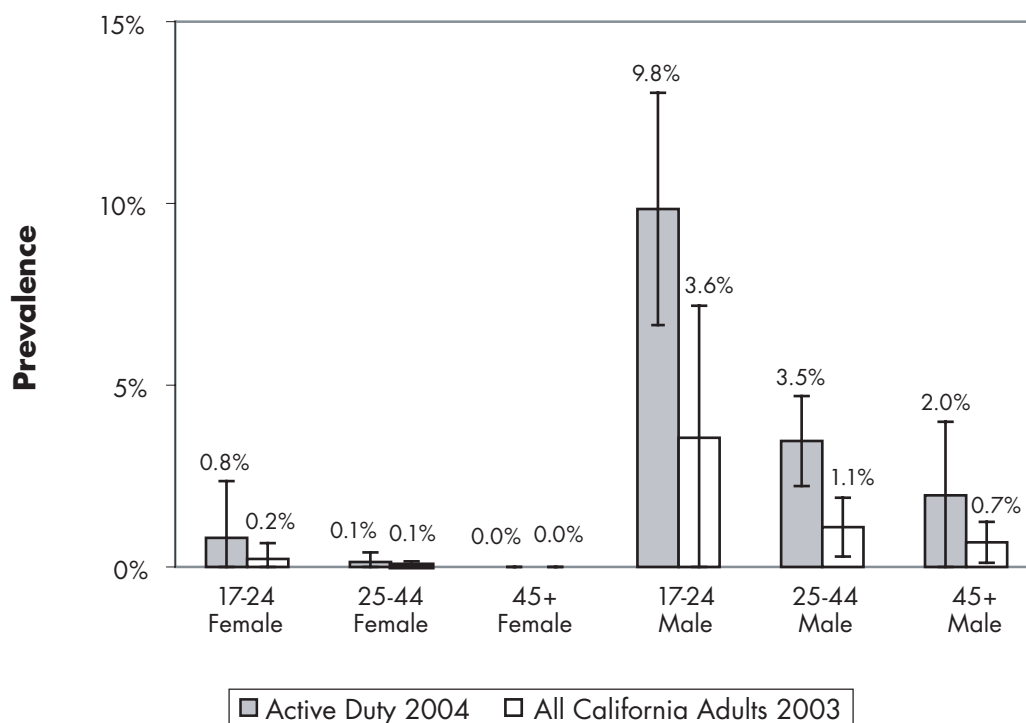
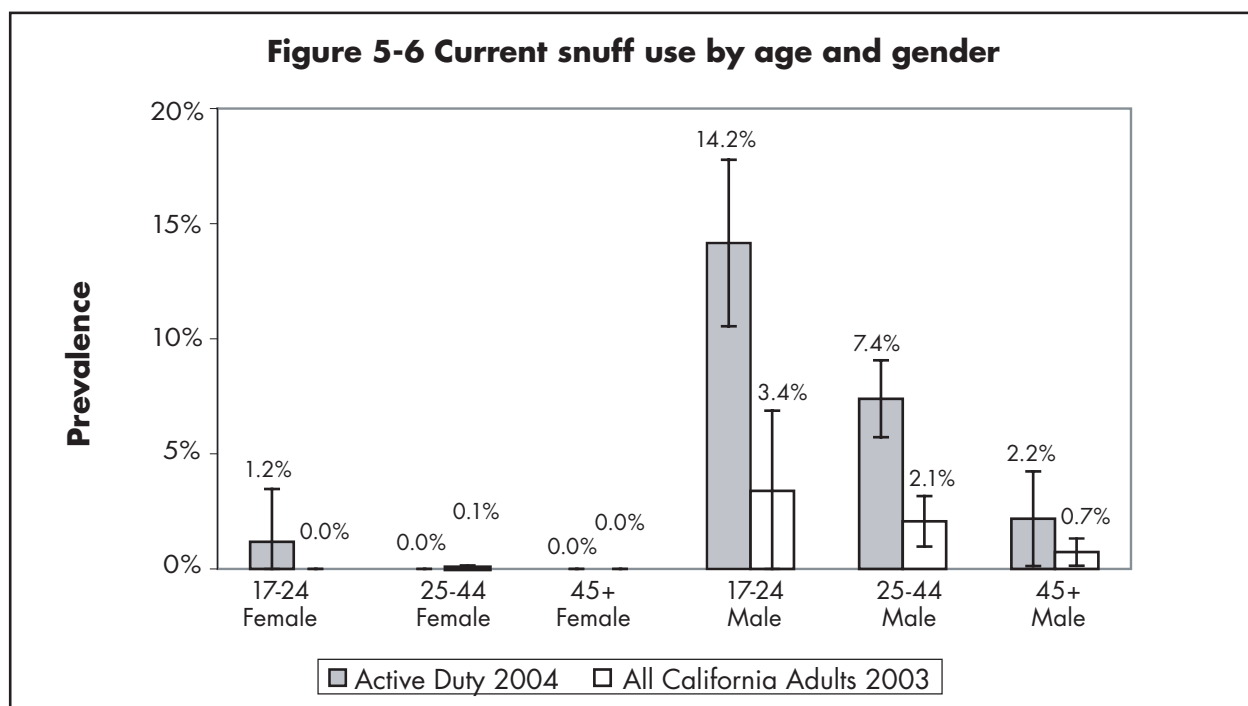


Figure 5-5 Current chewing tobacco use by age and gender

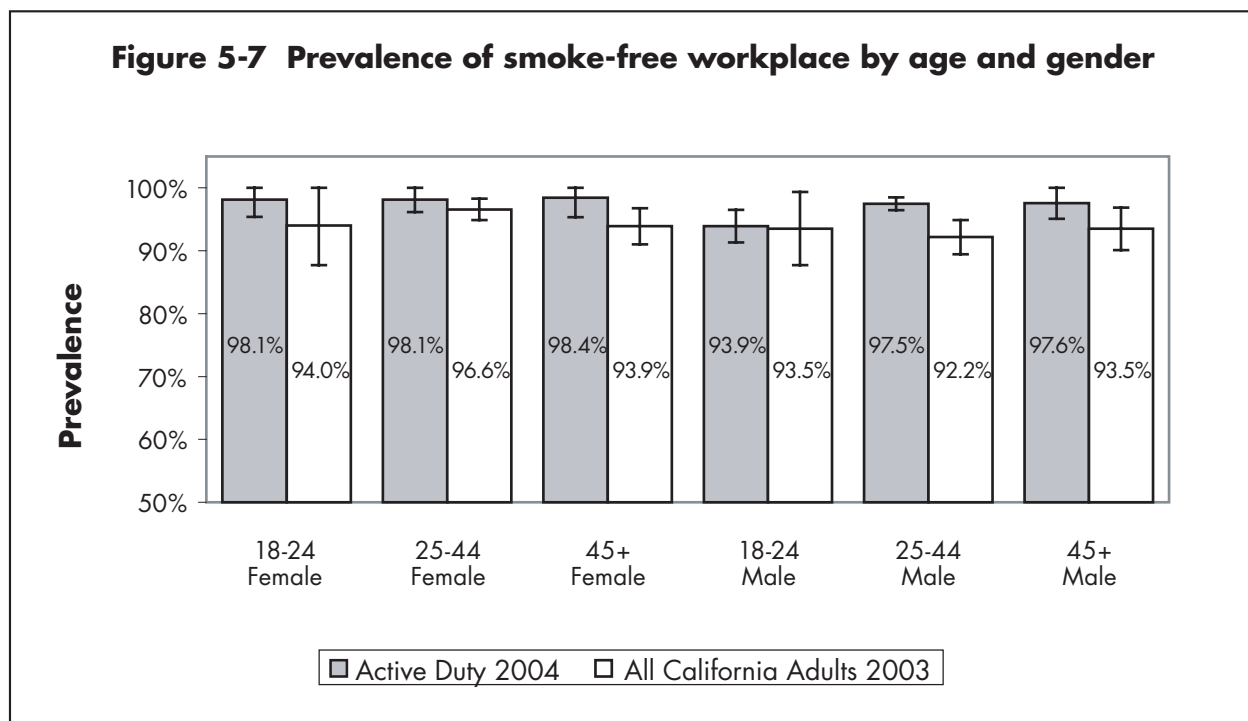




II. Tobacco Exposure

Smoke-Free Workplace

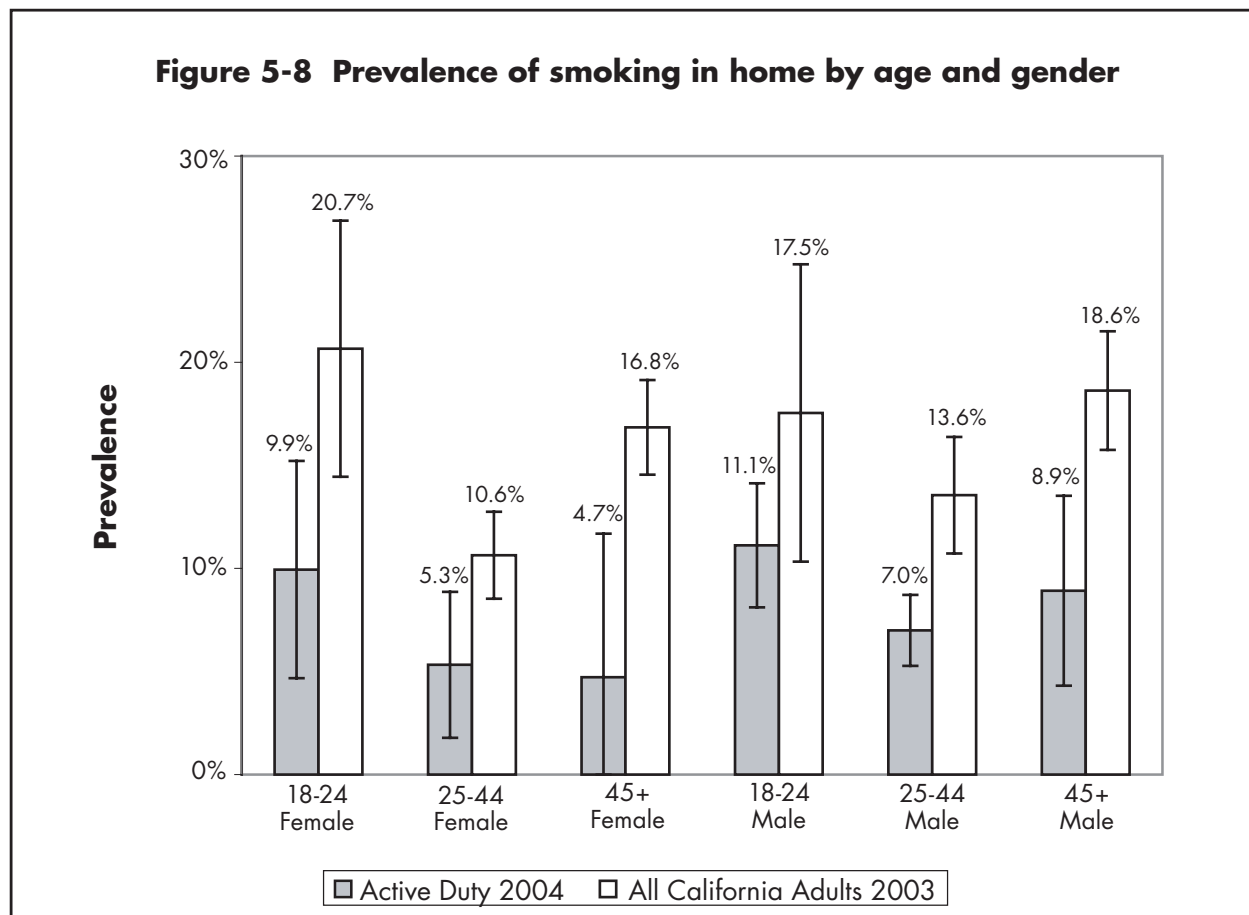
Active duty military reported a slightly higher prevalence of smoke-free work places (96.3% [95.3, 97.4%]) than did the overall California population (94% [92.7, 95.2%]), with no significant variation among, or across any subpopulation. This may reflect both the military and state's consistent set of no smoking regulations that are strictly enforced. These results are displayed in Figure 5-7.



Smoking in the Home

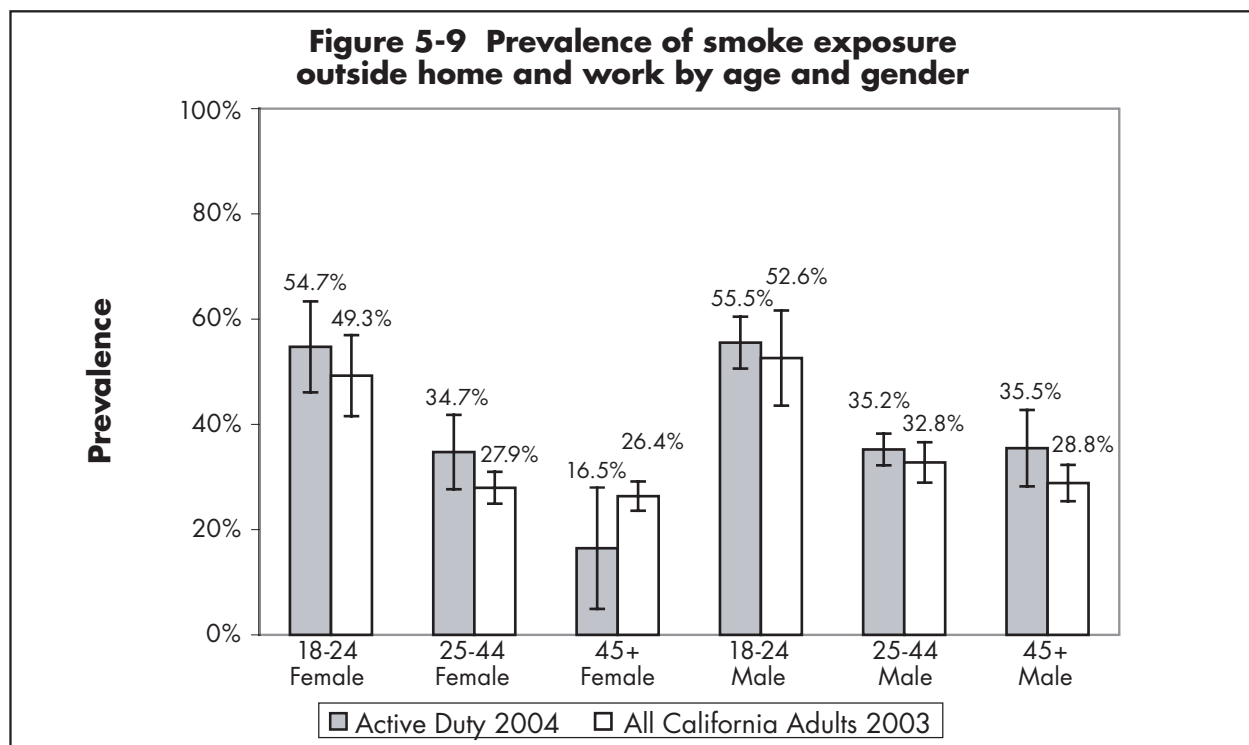
A smaller percentage of active duty respondents reported the presence of smoking in the homes than did the overall California population. Overall, only 8.6% (7.2, 10%) of active duty personnel reported smoking in the home compared with 15.2% (3.9, 16.4%) of California respondents.

California males and females over age 45 both reported statistically higher rates of smoking in the home than did similar populations of active duty personnel. Similarly, the California male population aged 25-44 reported statistically significantly higher rates of smoking in the home than did the similar population of active duty personnel. These results are shown in Figure 5-8.



Prevalence of Smoke Exposure Outside the Home and Work

Both active duty military and California populations exhibited similar response patterns when asked about the prevalence of smoke exposure outside the home or work, although active duty respondents generally reported higher prevalence's. Males age 18-24 in both populations (55.5% [50.6, 60.5%] active duty, 52.6% [43.6, 61.7%] California), and females (54.7% [46.1, 63.4%] active duty, 49.3% [41.6, 57.0%] California) reported the highest exposure rates. These findings suggest that this may, in part, reflect similar social habits among respondents in this age group regardless of their other demographics. These results are displayed in Figure 5-9.

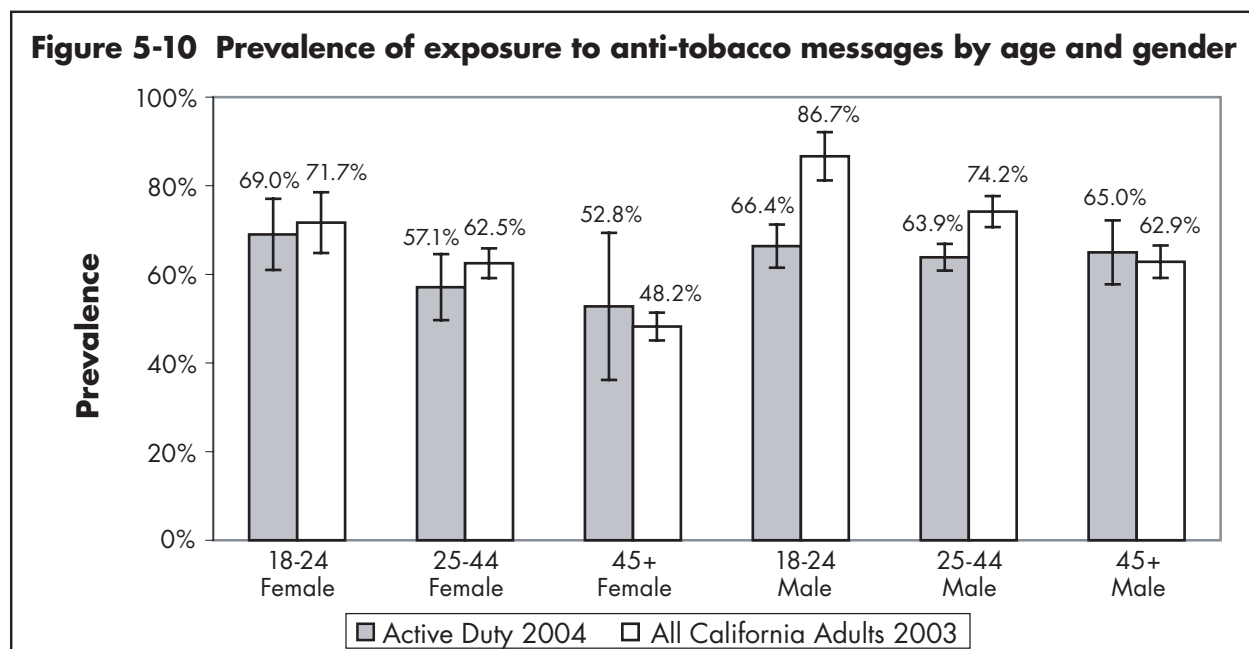


III. Anti-Tobacco Campaign Exposure

General

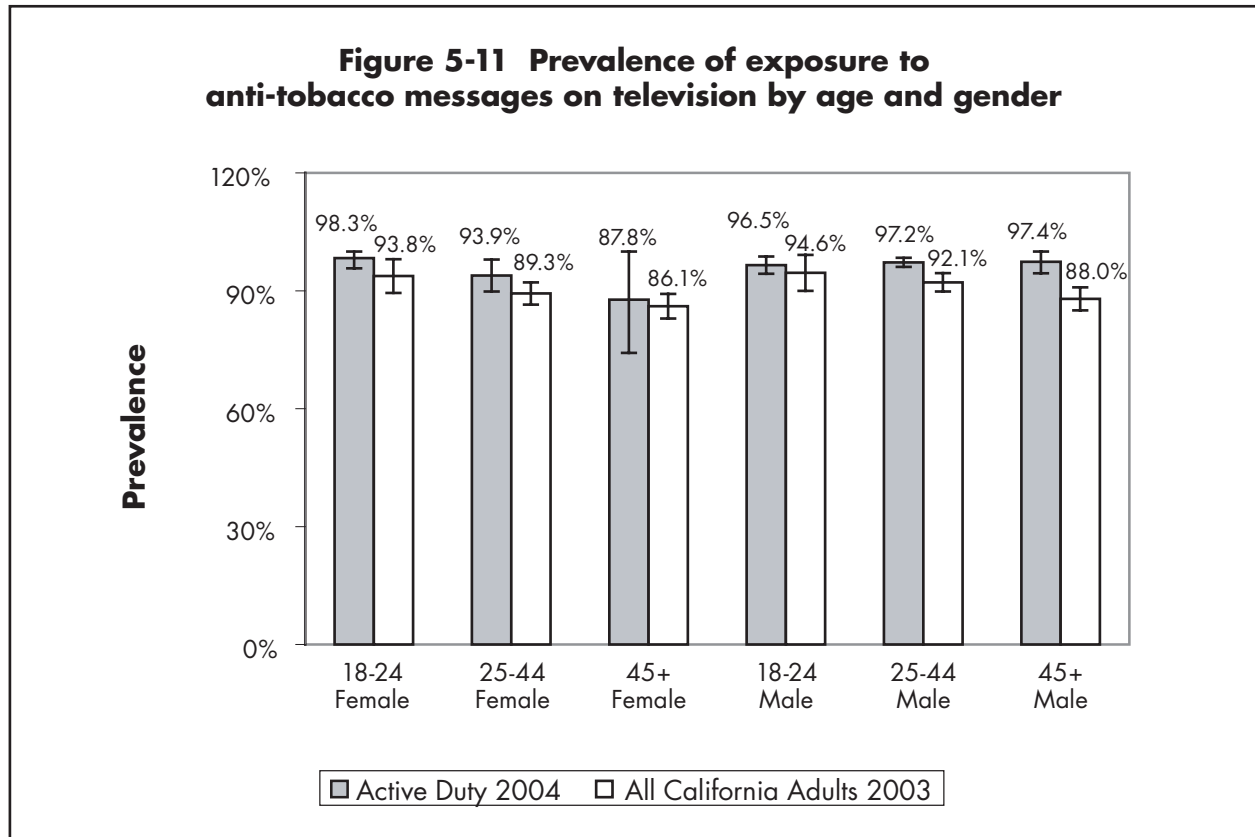
This section discusses a comparison of the two populations' responses to the reporting of exposure to anti-tobacco messages in different ad media. In general, the response patterns of both populations were similar.

Males, ages 18-24 and 25-44 in the California population reported the highest rates of exposure to anti-tobacco information (86.7% [81.2, 92.1%] and 74.2% [70.7, 77.7%] respectively). Additionally, these rates were significantly higher statistically than similar age populations of active duty military. These results are displayed in Figure 5-10.



Television

Both the general California populations and active duty populations reported high rates of exposure to anti-tobacco information from television (active duty 96.8% [95.8, 97.8%], California 90.2% [89.0, 91.5%] with little variation among or across subpopulations. Data is shown in Figure 5-11.



Radio

In contrast to television, fewer respondents (active duty personnel 60% [56.7, 63.9%], California 40.3%) reported hearing anti-tobacco messages on the radio, with the active duty rate being significantly higher. As shown in Figure 5-12, the most variation among the subpopulations was seen in females age 25-44.

Billboards

Two-thirds (66.6%, [63.6, 69.7%]) of California active duty respondents reported seeing anti-tobacco messages in billboards. This was significantly higher statistically than the 48.3% (46, 50.6%) reported by the general California population. The greatest variation between the two populations was seen in respondents greater than age 45.

70.6% (61.3, 79.7%) of male active duty personnel older than 45 reporting seeing these messages on billboards, compared with only 49% (44.1, 53.8%) of similar California respondents; and 72.5% (54.3, 90.7%) of female active duty respondents older than 45, compared with 38.1% (33.7, 42.4%) from California respondents. This data is shown in Figure 5-13.

Figure 5-12 Prevalence of exposure to anti-tobacco messages on radio by age and gender

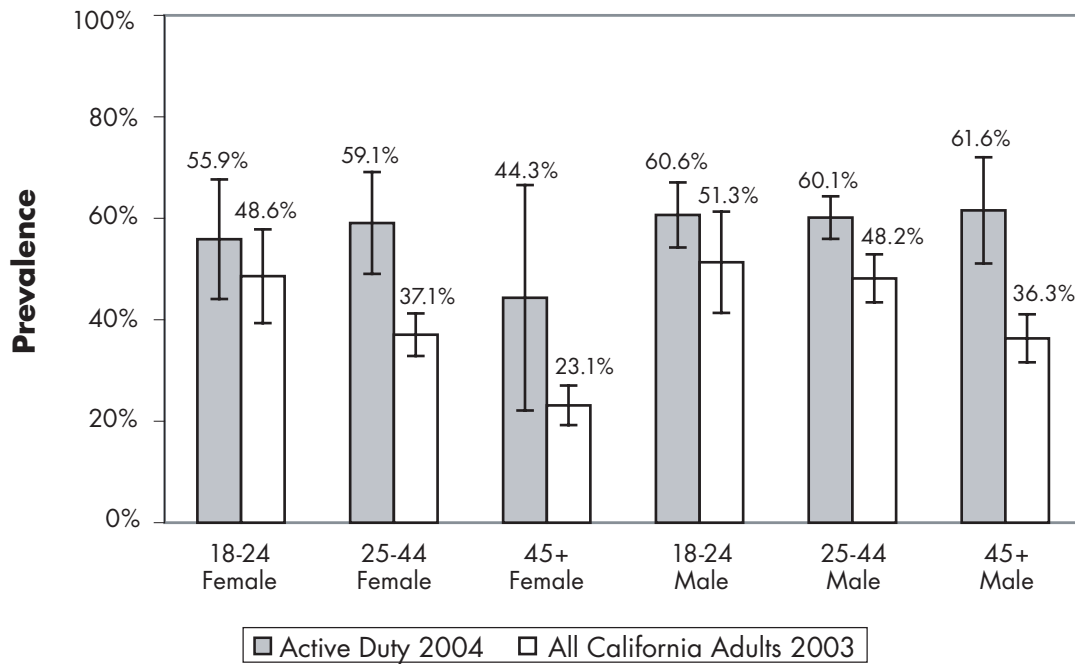
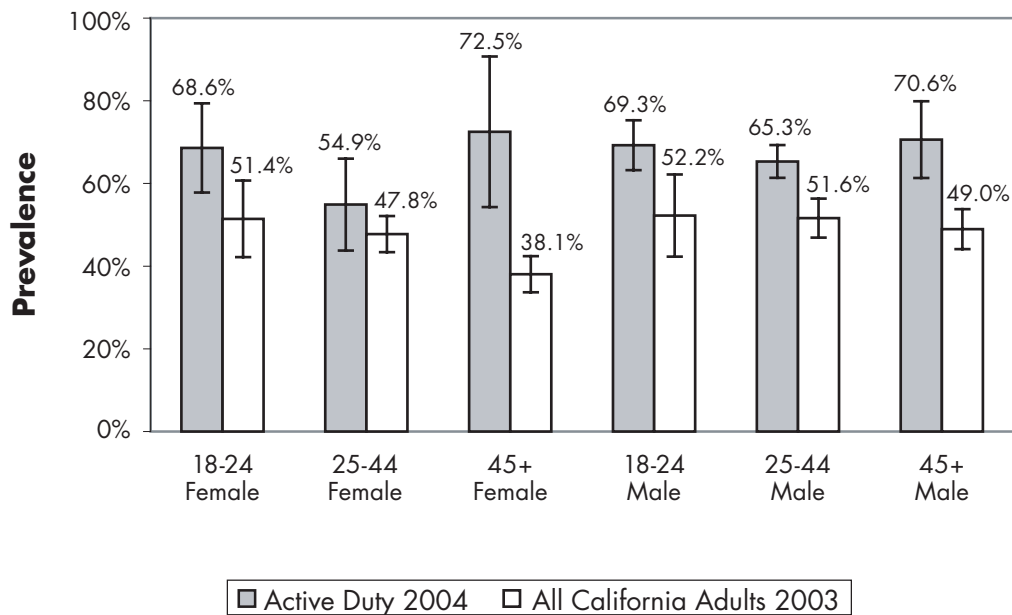
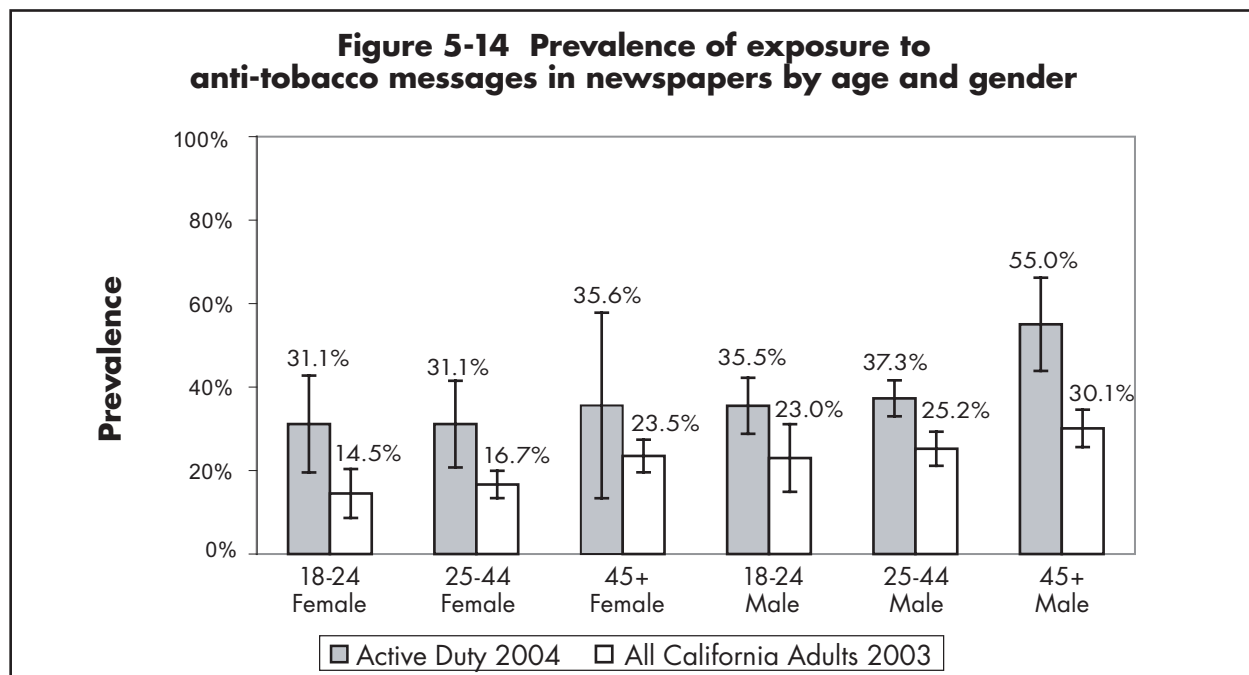


Figure 5-13 Prevalence of exposure to anti-tobacco messages on billboards by age and gender

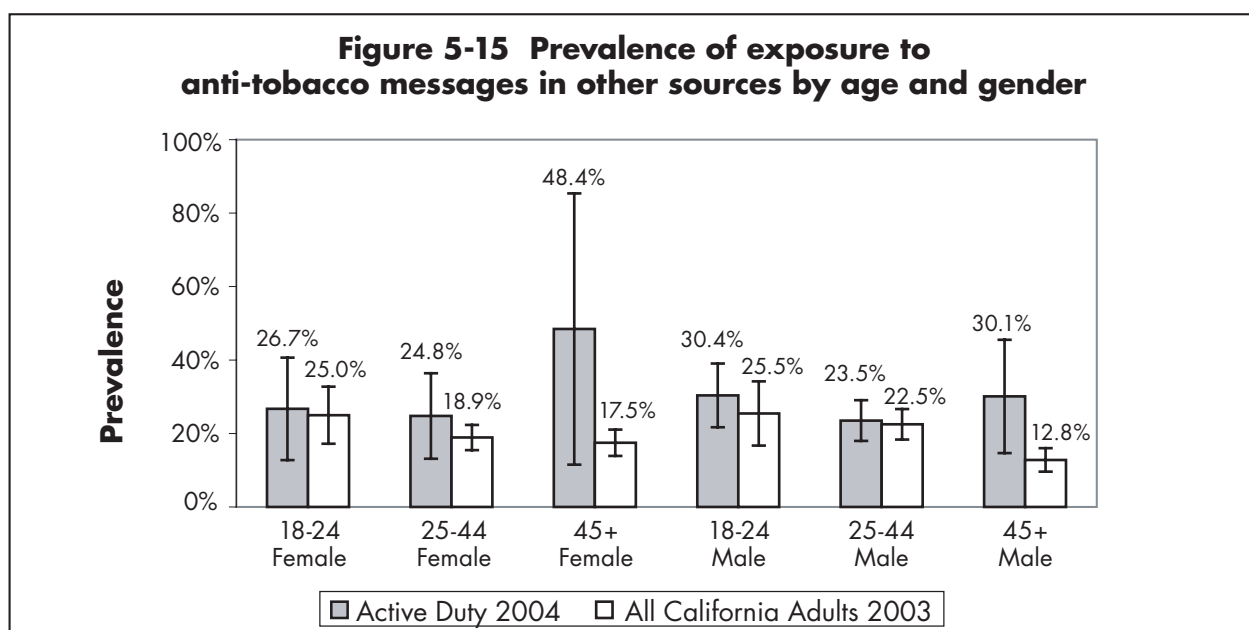


Newspapers

Active duty personnel also reported higher rates of exposure to anti-tobacco messages in newspapers. More than one-third (36.5%, [33.2, 39.9%]) of military personnel answered positively, compared with 22.8% (20.9, 24.8%) of the general California population. Male active duty personnel between ages 25-44, and over age 45 reported statistically higher rates of seeing such messages in newspapers; the rate for male active duty personnel, ages 25-44 was 37.3% (33.0, 41.6%) compared with the California rate of 25.2% (21.1, 29.3%). Male active duty personnel over age 45 reported exposure rates of 55.0% (43.9, 39.9%) compared with the California respondent rate of 30.1% (25.6, 34.6%). This data is shown in Figure 5-14.



About one-fourth (26.7% [22.4, 31.1%]) of active duty personnel reported seeing anti-tobacco information in other sources, including magazines, the Internet, and at military units and medical facilities. This was significantly higher than the 19.8% (17.9, 21.7%]) reported from other sources by the California population. These figures are shown in Figure 5-15.



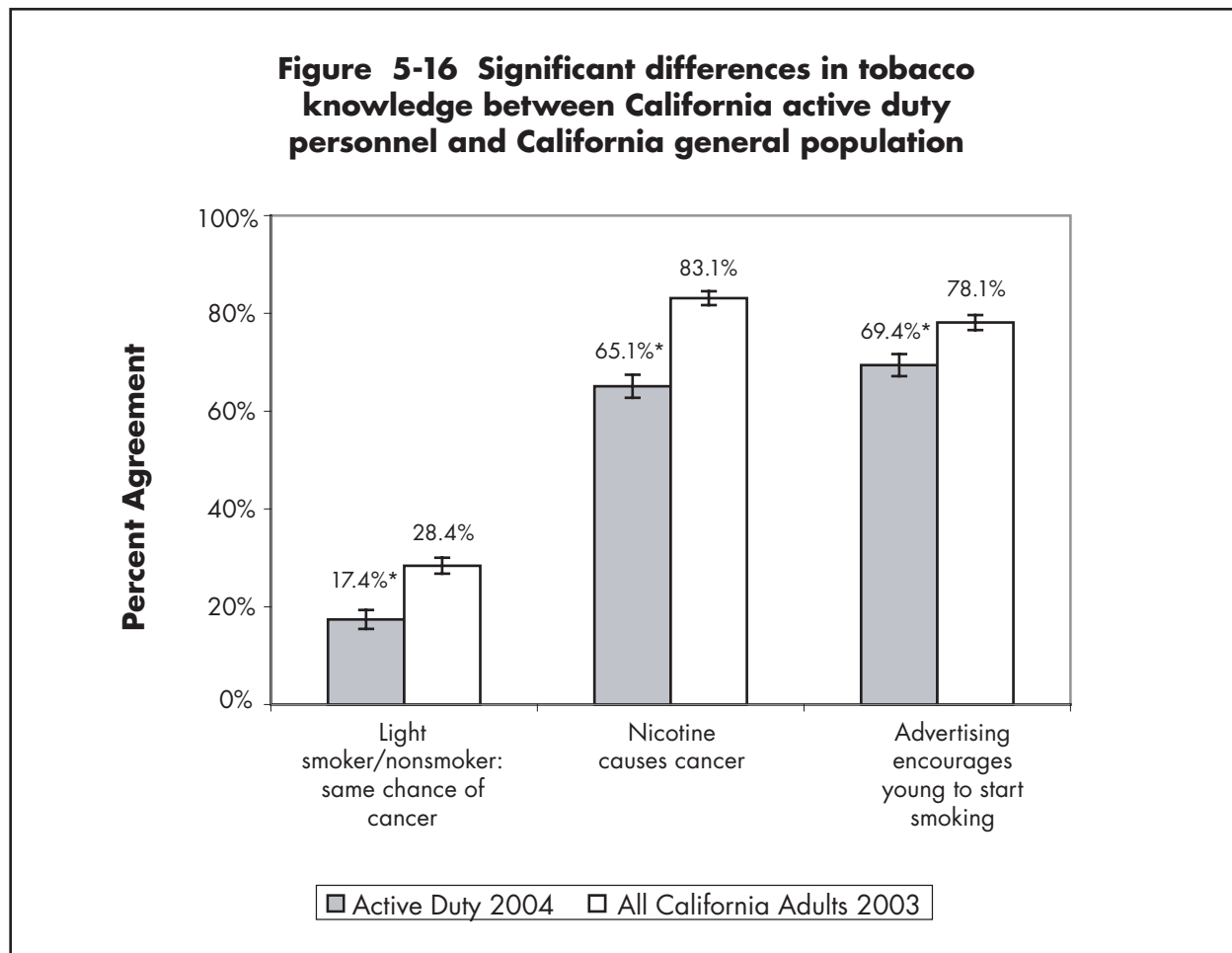
IV. Knowledge and Attitudes

Tobacco Knowledge

Tobacco knowledge in the active duty military population was statistically different than the California population in three areas:

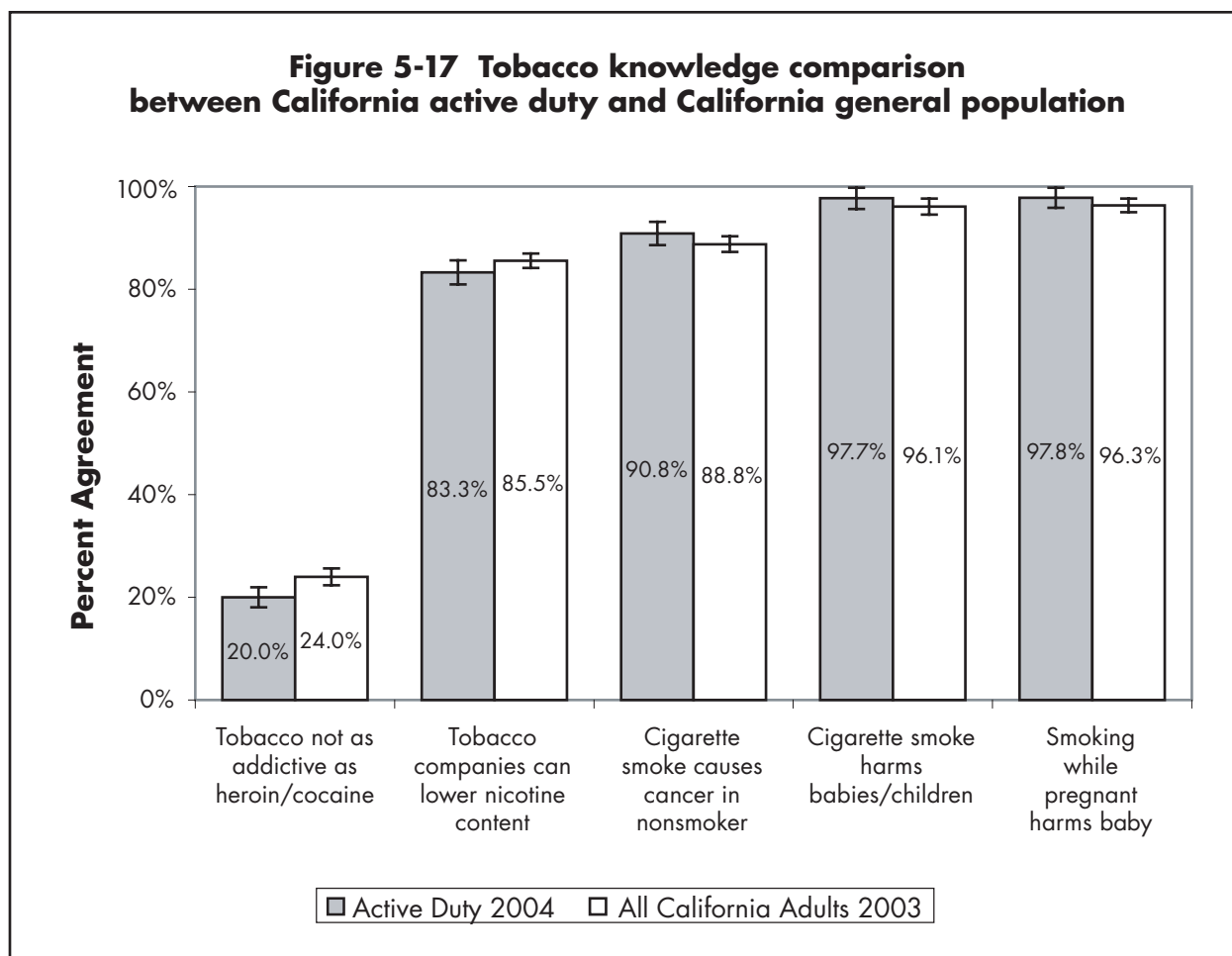
- "If a person smokes only five cigarettes per day ("light smoking"), their chances of getting cancer from smoking are about the same as someone who never smokes." (Question 122)
- Only one out of five (18%) of the military personnel responded that light smokers and non-smokers had the same chance of developing cancer, compared with 30% of the California population responding that this statement was true.
- "Nicotine is a cause of cancer." (Question 123)
- Almost two-thirds (65%) of military personnel responded that nicotine causes cancer. Yet this response rate was less than that of the general California population, of whom 85% stated this statement was true.
- "Tobacco advertising encourages the young to start smoking." (Question 105)

Only 69% of military respondents answered that tobacco advertising encourages the young to start smoking, compared with a rate of 78% from California respondents. These results are shown in Figure 5-16.



* P < 0.05

The remainder of the responses between the two populations were not statistically different and are shown in Figure 5-17.



Tobacco Attitudes

Generally, the **patterns** of responses between the active duty population and the general California population were similar. However, active duty personnel responses were significantly different than those of the general California population in eight of sixteen surveyed areas. Active duty military felt more strongly that tobacco spokespersons mislead the public in saying that tobacco is not addictive. They felt less strongly on the following: that store owners should need licenses to sell cigarettes; that cigarette vending machines should be totally prohibited; the tobacco industry should be forced to put stronger warning on all their potentially harmful products; that cigarette advertising should be banned at sport events and on print media; that the government should regulate tobacco products; and, that coupon exchanges for products should not be permitted. These results are displayed in Table 5-1

Table 5-1
Tobacco Attitudes California Active Duty Personnel Compared to California General Population

Tobacco Attitudes	Active Duty	California	Difference
Enforce laws preventing cigarette sales to minors	97.5%	96.6%	0.9
Package needs disclosure of harmful contents	91.6%	93.1%	-1.5
Prefer eating in smoke free restaurant	91.5%	92.7%	-1.3
Tobacco spokespersons mislead public saying tobacco not addictive	90.7%	86.7%	4.1*
All indoor work sites should be smoke free	89.1%	91.9%	-2.8
Minors who are caught buying cigarettes should be fined	84.2%	81.1%	3.1
Owners should need license to sell cigarettes	75.9%	82.8%	-6.9*
Prohibit cigarette vending machines	75.5%	82.0%	-6.5*
Stronger warning labels on tobacco products	74.1%	80.2%	-6.1*
Should not permit free tobacco samples or coupons	72.4%	77.3%	-4.9
Ban cigarette advertising at sport events	66.1%	75.2%	-9.1*
Government should regulate tobacco products	65.4%	72.2%	-6.9*
Ban cigarette advertising on print media	63.3%	70.2%	-6.9*
Should not permit coupon exchange for products	50.5%	65.2%	-14.7*
Cigarette sales in U.S. should not be legal	46.0%	43.9%	2.1
Government exaggerates smoking risks	17.2%	21.7%	-4.5

* -- p < 0.05

CHAPTER 6

Contrasts Between the Subpopulations of Active Duty and California 18 to 24 Year Old Males

As mentioned earlier in this report, the responses from active duty CADT respondents and the general California 2003 CATS respondents were, in general, similar, with two exceptions. First, tobacco use among young active duty males was significantly greater than for a comparable group of California young males. Second, older active duty female personnel used tobacco products at a statistically lower rate than a comparable segment of the general California population.

As the focus of this report is to provide information to DHS that will better enable the development and implementation of anti-smoking initiatives toward elements of the active duty military population, the discussion will be confined to the young, male segment of the population with a higher smoking rate.

Demographic Description of Active Duty Population of 18 to 24 Year Old Males

The largest number of active duty males between the ages of 18 and 24 were in the Marine Corps (48%), followed by the Navy (28.8%). The distribution of these personnel across the military services is shown in Table 6-1.

Table 6-1
Distribution of Male Active Duty Personnel Age 18-24 by Branch of Service

Branch of Service	Percentage of Personnel
Marine Corps	48.0%
Navy	28.8%
Air Force	11.7%
Army	11.5%

Demographic Comparison of Active Duty and California 18 to 24 Year Old Populations

Active duty personnel demographics in this age range differed significantly from the comparable general California segment in two demographic parameters: 1) 60% (54.7, 64.5%) of active duty personnel were white non-Hispanic, compared with 46.5% (37.3, 55.7%) of the general California population; and 2) 40% (34.8, 44.5%) of active duty personnel were married, as compared with 9% (4.2, 13.6%) of the California population. The California male population reported a slightly higher rate of education beyond high school. These results are shown in Figure 6-1.

More active duty respondents' (70.8% [62.7, 78.9%]) were white, non-Hispanic than the California general population (52.1% [30.6, 73.6%]). Educational levels were similar, but significantly more active duty respondents (38.6% [30.3, 46.9%]) were married compared to the California population (2.7% [0, 8.1%]). These results are displayed in Figure 6-2.

Figure 6-1 Demographics of California active duty and general population respondents

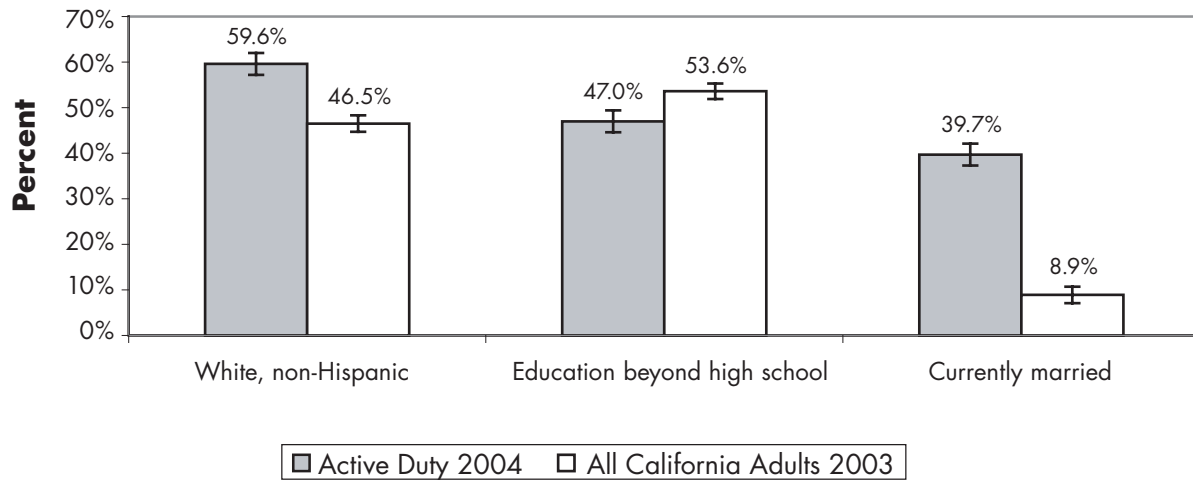
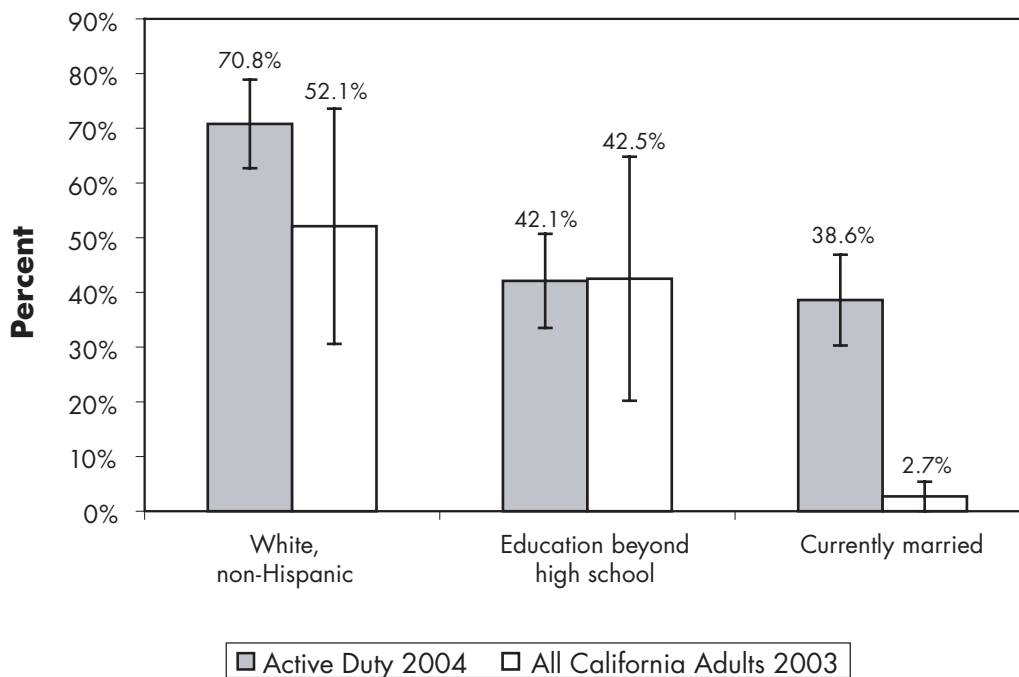
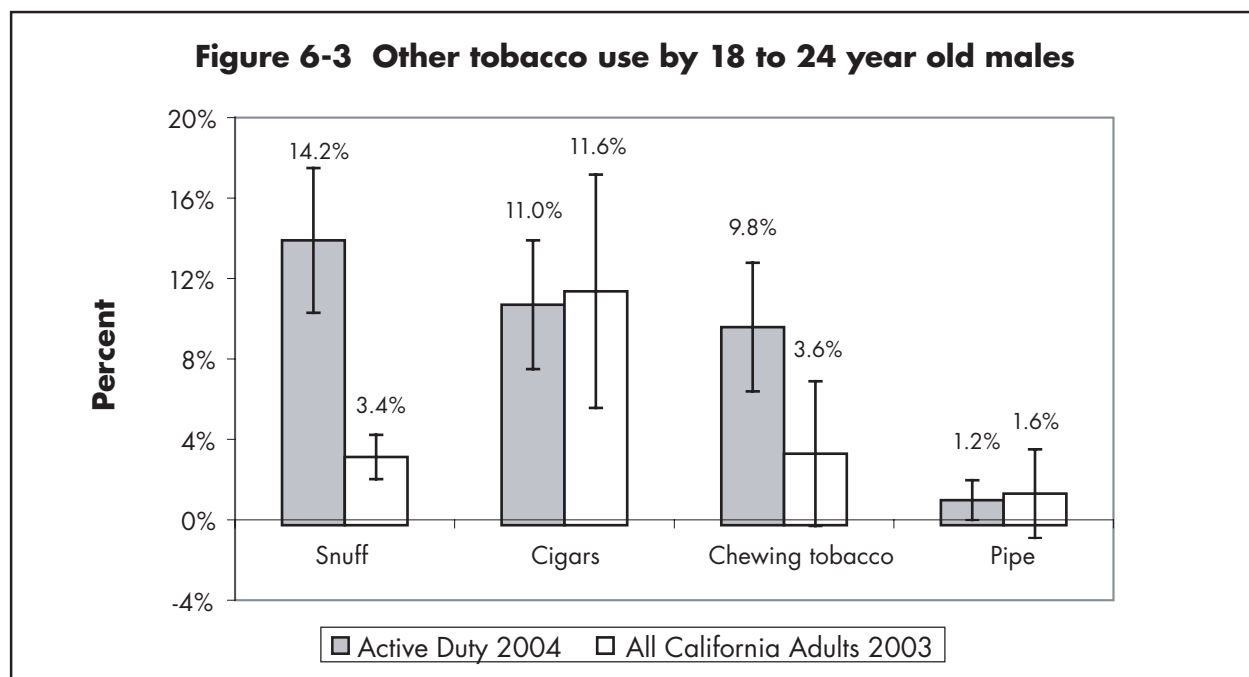


Figure 6-2 Demographics of male smokers age 18-24



Other Tobacco Use

Male active duty respondents aged 18-24 reported that 14.2% (10.5, 17.8%) used snuff on some days, compared with 3.4% (0, 6.9%) in the California population. 11% (3.7, 12.4%) reported smoking a cigar several times per week over the past month, compared with 11.6% (5.8, 17.4%) reported in the comparable CATS population. 9.9% (6.6, 13%) reported currently using chewing tobacco on some days, compared with 3.6% (0, 7.2%) in the California population. 1.2% (0, 2.2%) reported smoking a pipe, compared with 1.6% (0, 3.8%) in the California population. Each of these categories of other tobacco products use is displayed in Figure 6-3.



Responses from the active duty and California populations were compared with results from the national DoD population taken from the DoD Survey of Health Related Behaviors Among Military Personnel. This is the eighth in a series of DoD surveys conducted since 1980 and has three broad aims: a) to continue the survey of substance use among active duty military personnel; b) to assess progress toward selected Healthy People 2000 objectives for active duty military personnel; and c) to provide baseline data regarding progress toward selected Healthy People 2010 objectives for active duty military personnel. As such, it provides comprehensive and detailed estimates of the prevalence of alcohol, illicit drugs, and tobacco use, as well as the negative effects of alcohol use.

The eligible population for this survey consisted of all active duty military personnel except recruits, service academy students, persons absent without official leave (AWOL), and persons who had a permanent change of station (PCS) at the time of data collection. The final sample consisted of 12,756 military personnel (3,269 Army, 3,625 Navy, 3,008 Marine Corps, and 2,854 Air Force) who completed self-administered questionnaires anonymously. Participants were selected to represent men and women in all pay grades of the active force throughout the world.

This survey identified 'smokers' as anyone who had smoked "a cigarette in the past month;" the higher prevalence of cigarette smoking in this reported population as compared to the CADT findings may be explained by this difference in polling.

Since the CADT study focused on regular smokers (who smoke cigarettes every day), it is possible that the DoD Health Risk Behavior Survey involves individuals who are regular smokers – just like the CADT survey – but also includes first time or irregular cigarette smokers.

Table 6-2 displays other tobacco use by the California active duty population compared with the national DoD population and the general California population.

Table 6-2
Other Tobacco Use Comparison
California Active Duty Population – Overall DoD Population – California Population

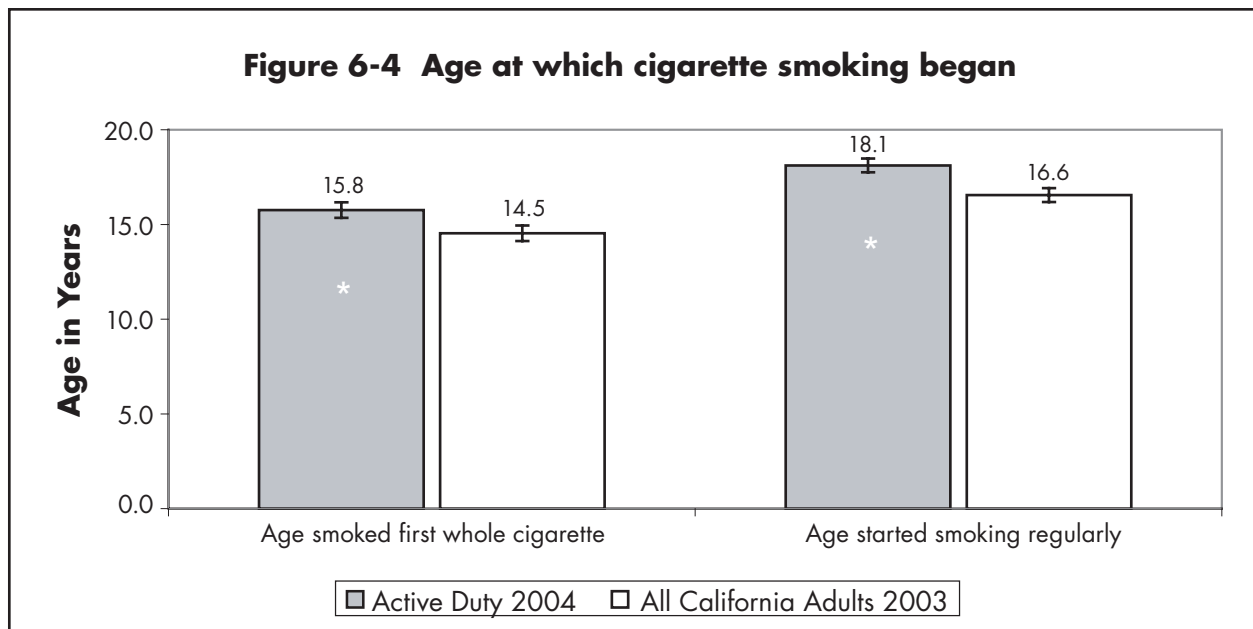
	CADT	95% CI	DoD Risk Behavior Survey*	California Population	95% CI
Smoking Prevalence	33.3%	28.6 – 38.1%	45.4%	17.0%	10.2, 23.0
Other Tobacco Use					
Cigar	11.0%	7.7 – 14.2%	32.6%	4.4%	
Pipe	1.2%	0.0 – 2.2%	4.2%	1.6%	0.0 – 3.8%
Snuff	8.6%	7.1 – 10.1%	19.4%		
Chewing tobacco	5.2%	3.9 – 6.5%			

Note: CI = confidence interval.

* Any cigarette use in the past 30 days

Age at which First Smoked

Active duty personnel reported smoking their first cigarette at age 15.8 years (15.3, 16.1). This was significantly later than (1.3 years) reported by the general California population of comparable males (14.5 years [13.8, 15.3]). Similarly, they reported starting to smoke regularly at age 18.1 years (17.8, 18.5), significantly later (1.5 years) than the 16.6 (15.7, 17.4) years reported by California males. These results are displayed in Figure 6-4.



Circumstances in which Active Duty Personnel Began to Smoke

Active duty personnel reported that being “in a social situation” was the most common circumstance in which they began to smoke (46.3% [38.8, 53.7%]). This was almost three times as often as the next most frequent circumstance – “for enjoyment” (16.3% [11.0, 21.6%]). These were followed by stressful situations (10.5% [6.3, 14.8%]); and being in a place where alcohol was served (7.5% [3.4, 11.6%]). Only 6.3% (2.2, 10.3%) of the time was military deployment reported as the circumstance in

which the active duty military personnel began smoking. No comparable data was found in the CATS survey. The response rates of situations in which they first started smoking are shown in Table 6-3.

Table 6-3
Situation in Which First Started Smoking Cigarettes California Male Active Duty Personnel Age 18-24

Situation First Started Smoking	Agree	95 % CI
Social situation	46.3%	38.8 – 53.7%
For enjoyment	16.3%	11.0 – 21.6%
Stressful situation	10.6%	6.3 – 14.8%
Where alcohol was Served	7.5%	3.4 – 11.6%
Deployment	6.3%	2.2 – 10.3%
Aroma of cigarette smoke	2.6%	0.0 – 5.3%
While driving	1.0%	0.0 – 2.1%
Permanent change of station/relocation	0.8%	0.0 – 2.1%
Death or tragedy	0.7%	0.0 – 1.9%
Other	8.1%	4.3 – 11.8%

Note: CI = confidence interval

Reasons for Returning to Smoking

California active duty personnel reported a differing response pattern when asked for reasons that they returned to smoking. “A stressful situation” was the highest circumstance in which they returned to smoking, accounting for 21.3% of the reasons reported (14.5, 28%). Yet, this was statistically lower than the response reported from the general California population of 41.3% (12.6, 70%). A “social situation” only accounted for 18.3% (11.9, 27.7%) of the stated circumstances in which they returned to smoking, compared with 16.5% (0, 35.3%) of the California population. “Where alcohol was served” was third (17.1% [10.7, 23.6%]), compared with 16.1% (0, 35.5%) of the California population. The results of this question are displayed in Table 6-4.

Table 6-4
Situation in Which Returned to Smoking Cigarettes California Males Age 18-24

	Active Duty Population		California Population	
	Agree	95% CI	Agree	95% CI
Stressful situation	21.3%	14.5, 28.0%	41.3%	12.6 – 70.0%
Social situation	18.3%	11.9, 24.7%	16.5%	0.0 – 36.2%
Where alcohol was served	17.1%	10.7, 23.6%	16.1%	0.0 – 35.5%
Other	13.7%	8.4, 19.0%	0.0%	0.0 - 0.0%
Irritable due to smoking withdrawal	8.5%	4.0, 13.0%	5.6%	0.0 – 17.6%
Deployment	8.4%	4.0, 12.9%	0.0%	0.0 – 0.0%
For enjoyment	8.2%	3.7, 12.7%	3.2%	0.0 – 10.4%
Marital problems	1.9%	0, 4.0%	0.0%	0.0 – 0.0%
Aroma of cigarette smoke	1.4%	0, 3.3%	0.0%	0.0 – 0.0%
While driving	1.0%	0.8 – 2.6%	0.0%	0.0 – 0.0%
A move or relocation	0.2%	0, 0.6%	0.0%	0.0 – 0.0%
Death or tragedy	0.0%	0, 0%	17.3%	0.0 – 41.5%

Note: CI = confidence interval

Purchase of Cigarettes

Almost all of active duty personnel (96.8%) and CATS respondents (91% [77.4, 100%]) purchased their cigarettes in California. Most active duty personnel (55%) bought them on base either at the Military Commissary or Exchange, or at convenience stores. Significantly more California respondents (66.3% [44.8, 87.8%]) reported buying their cigarettes at convenience stores or gas stations. These results are shown in Table 6-5.

Table 6-5
Usual Place of Cigarette Purchase California Males Age 18-24

	Active Duty Population		California Population	
	Agree	95% CI	Agree	95% CI
Military Exchange	44.6%	35.5 -53.7%	0.0%	0.0 - 0.0%
Convenience Store/Gas Station	31.3%	22.6-40.0%	66.3%	44.8 - 87.8%
Military Commissary	10.4%	4.8 -15.9%	3.1%	0.0 - 9.8%
All Other	8.9%	3.0 -14.7%	3.0%	0.0 - 9.3%

Note: CI = confidence interval

Exposure to Smoke in Workplace, Home, and Other Areas

Several questions were asked in an attempt to discern where smoking activities occurred among 18 to 24 year old active duty males. As mentioned earlier in this report, 93.9% (91.3, 96.5%) reported that their work places were smoke-free, compared with 93.5% (87.7, 99.3%) reported by the comparable CATS population. 11.1% (8.1, 14.3%) reported that anyone smoked in their homes, compared with 17.5% (10.3, 24.6%) of California respondents. However, 55.5% (50.6, 60.5%) reported being exposed to SHS outside the home or workplace, compared with 52.6% (43.6, 61.7%) reported from California respondents. Almost three-fourths (74.2% [69.9%, 78.5%]) of the active duty population reported having been to a bar or club in the past 12 months, compared to 58.7% (49.8%, 67.6%) of the comparable California population. Similar percentages reported that the bar or club was smoke-free. Table 6-6 displays these results.

Table 6-6
Exposure to Smoke in a Social Setting Comparison of California Active Duty and General Populations

	Active Duty		California %	
	Agree	95% CI	Agree	95% CI
Have you been to a bar, nightclub?	74.2%	69.9 - 78.5%	58.7%	49.8 - 67.6%
Was this place smoke free?	61.4%	55.5 - 67.2%	67.1%	55.4 - 78.8%

Note: CI = confidence interval

Smoking Cessation Activities

A large majority (82.1% [75.9, 88.3%]) of young, male active duty smokers reported a desire to stop smoking, and 45.1% (%) reported that they planned to quit smoking in the next 30 days. They were asked several questions about exposure to anti-smoking information and smoking cessation activities in their military environment. Almost half of respondents reported seeing or hearing anti-tobacco messages at their current duty station. However, no one source was reported as providing anti-tobacco information by more than 30% of the active duty population. This data is shown in Figure 6-5.

In addition, while 77% (84.6, 69.4%) of respondents reported seeing their doctor within the past year, only 41.4% reported that the doctor advised them to stop smoking. These rates, however, were higher than those reported by the general California population (61.9% [80.8, 43.0%] and 27.2% [50.0, 10.8%]). These results are displayed in Figure 6-6.

Only 12.2% reported the use of medication to help quit smoking, 4.5% used counseling advice in cessation attempts, and 9.9% used self-help materials.

Figure 6-5 Source of anti-tobacco messages within current command (active duty males, 18 to 24-years-old)

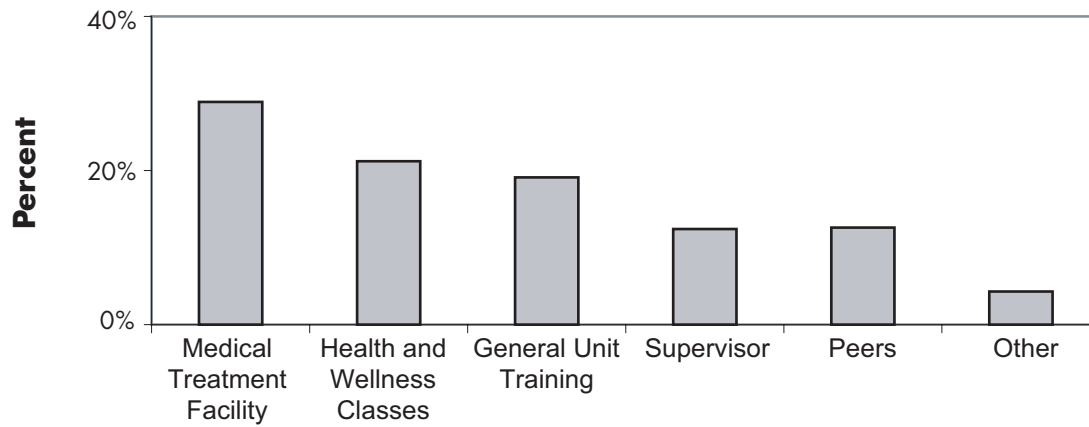
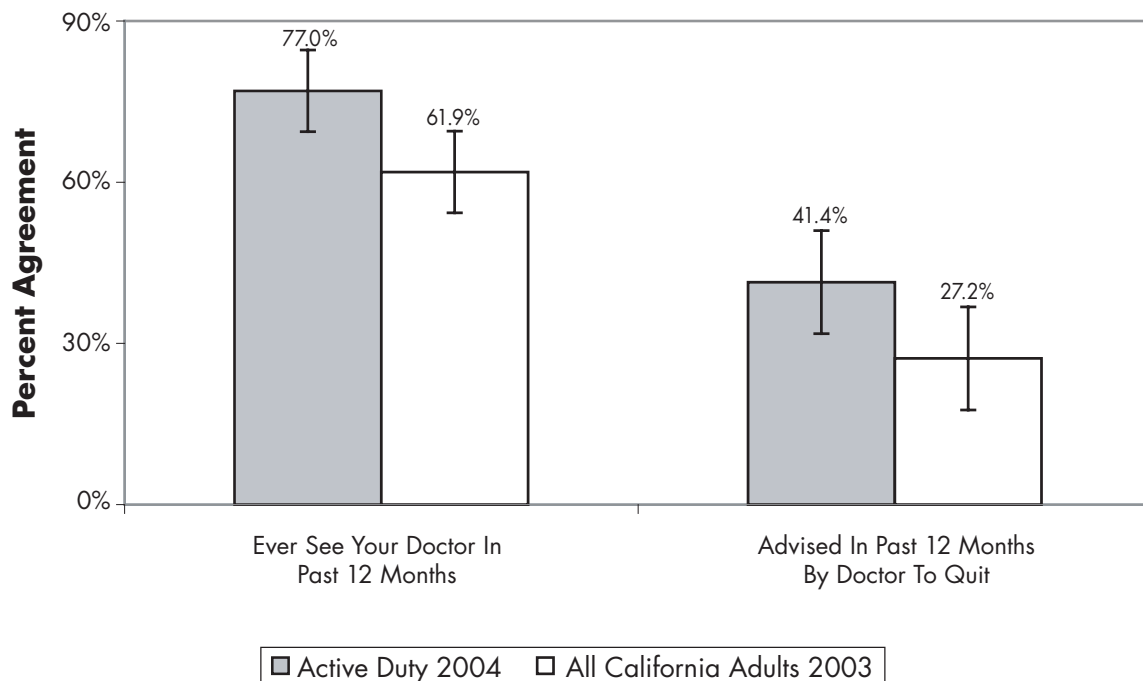


Figure 6-6 Physician visit and smoking cessation advice



CHAPTER 7 Conclusions and Recommendations

Tobacco Use Behavior Differences

This study found some striking differences in tobacco use patterns between active duty personnel and the California population, as found in the 2003 CATS survey. For example, for women over the age of 45 years, the active duty personnel indicated that they smoked cigarettes at a rate about two-thirds that of the comparable California female population.

The more remarkable difference in a comparison of the two response sets involves the demographic cohort of young men, 18- to 24-years-old. In the white, non-Hispanic ethnic category, the California segment of this population had a very slim majority (52%), compared to 70% of active duty personnel. The two groups had relatively similar educational levels, although California men were slightly (but not significantly) more likely to have some education beyond high school. On the other hand, active duty personnel were significantly more likely to be married (38.6% compared to 2.7% of California respondents). Finally, the most important difference was the active duty component of 18 to 24 year old men were twice as likely to smoke cigarettes and roughly three times more likely to use snuff or chewing tobacco than their California counterparts. The use of cigars and pipes was approximately the same in both the California population and the active duty cohort.

A natural question arises: Why are these young men in uniform smoking and using oral tobacco products at such a high rate? Examination of the other characteristics of this group suggests possible explanations. First, they were older by about a year and a half than their California counterparts when they began smoking. They also became regular smokers at an older age than the California 18 to 24 year old smokers; that difference was also about 18 months. In fact, active duty men in this group indicated that, on average, they were about 18-years-old when they began to smoke - for this particular group of individuals, just about the age at which they joined the active duty uniformed military service.

Facilitators to Smoking in the Military

It seems relevant to examine active duty personnel experiences to identify any facilitators of tobacco use that are peculiar to military culture and life. First, we note that active duty personnel are purchasing more than half (55%) of their cigarettes either from the military exchange store or the military commissary. The military has revoked the subsidy that for so long kept the price of tobacco in the exchange and commissary to about half the price in the civilian world. However, there is still tax protection for these products within the military shops. As a consequence, cigarette smoking in the military is cheaper than in the general population and is immune to effects of externally imposed taxes.

Smokers are also commonly allowed additional breaks at work in order to smoke. Although this practice is not unique to the military, and is common in many civilian workplaces, it is nonetheless a perquisite for smokers in the military. This privilege may serve in some small way as a facilitator of smoking in that environment.

There is anecdotal information that smoking rates among deployed troops in Operation Iraqi Freedom are on the rise. While there are not yet any studies to confirm the rise or the factors associated with smoking in a battle zone, the conventional wisdom is that the stress of battle and daily possibility of being injured or killed plays a major role in the decision of soldiers to smoke.

The active duty component studied was not deployed at the time of study, but approximately half had been recently deployed to Iraq. This may account for some of the smoking rate. However, the study cohort listed "stress" only 10% of the time as a cause of starting to smoke. On the other hand, these same active duty men said that "stress" was the most likely cause for them to return to smoking after having successfully stopped. Most of the deployed soldiers were Marines, and the study indicates that the Marines were the specific branch of service with the highest rate of smoking.

Another facilitator in the military is its unique social climate. Interestingly, active duty respondents indicated that the circumstance which was most likely associated with their beginning to smoke was “social.” Further, they said that a “social situation” accounted for returning to being a smoker about one-fifth of the time. For those individuals who gave narrative answers to the inquiry of what other causes might make them start or return to smoking, the most common answer was “peer pressure.”

The differences in usage patterns of active duty personnel, as compared to California residents of the same age, were striking for the use of cigarettes and oral tobacco products, but not for cigars and pipes. The probable commonality of the high use items is the relatively short time period required to obtain the ‘benefit’ one is seeking. A cigarette can be smoked in a few minutes and oral tobacco can be quickly placed in the mouth - and in both instances the individual’s hands are relatively free to continue to do work. Also, the materials themselves are fairly easy to carry on one’s person.

Cigars, on the other hand, require a much longer time to completely smoke; even though a cigar smoker can carry it in their teeth while doing some work, this is not the common form of cigar enjoyment. Cigars also are more bulky than cigarettes or a package of snuff. Pipes also require much more time to completely smoke, compared to finishing a cigarette. Pipes are also much bulkier to carry and often include other accessories in addition to the pipe and the tobacco. The pattern seems to suggest that use of cigarettes and oral products by active duty personnel may be chosen for ease and rapidity of use and possibly ease of transport. These attributes would be important to individuals whose job functions involve a good deal of roaming the base, usually on foot, and being physically active in most of their duties.

It is possible then, to construct a picture of young men coming into active duty military service having tried smoking, but not yet being a regular user of tobacco products of any type. The peer pressure and social situations within the close-knit community of the soldier may very well contribute to the soldier taking up smoking as part of “being one of the boys.”

For the reasons postulated above, cigarette smoking or the use of snuff or chewing tobacco would be the product of choice for these individuals. Of particular note, the primary aim of the first few weeks of active duty - the “boot camp” - is to change new recruits from free thinking individuals into members of a team who see the value and importance of teamwork and collegial support for all members of the team. This atmosphere would easily explain how a new recruit could become a smoker within a few months of first donning the uniform.

Barriers to Smoking in the Military

That said, several barriers exist to being a smoker within the military. The leaders of the military, both uniformed and civilian, are well aware of the cost to their operation by smoking. It is the official stance of the U.S. DoD to discourage smoking by active duty personnel. To this end, there are anti-tobacco briefings, posters, and announcements in various settings around every military base. Preventive medicine activities formally issued by the DoD call for active participation of medical staff in identifying and helping smokers who want to quit. In fact, of the 18 to 24 year old active duty members studied, about 60% of them commented that their recent visit to a physician included some form of encouragement to stop smoking.

A large percentage of these young men (38.6%) were married. In a different context, it was indicated they generally held beliefs that smoking was bad for pregnant women (for them and their baby) and that SHS was similarly detrimental to non-smokers (including children) within a household. The high rate of marriage and these beliefs should constitute a barrier to the smoking rate in this population - but it does not.

It was interesting and puzzling that the overwhelming majority of these young smokers indicated that, as a group, they worked in smoke-free workplaces (that is the universal policy of the DoD regarding indoor structures), did not smoke in the home, and frequent bars and night-clubs that were mostly (60%) smoke-free. This makes it unclear exactly where this group would actually smoke. But it seems clear they are able to find a location, allowing them to smoke more than a half a pack a day.

However, in spite of living with ineffective barriers and several facilitators to smoking, these men indicated that 80% of them wanted to quit smoking. Half of that group intended to actively seek solutions to stop smoking within the next month. This should encourage both the state of California and the DoD to provide more direct support for smoking cessation efforts.

Smoking Cessation Activities

Some comments are in order about the kind of support that might be provided through advertisements. The cohort of young active duty personnel indicated that they 'saw' anti-tobacco advertisements on television, radio, billboards, and in newspapers more often than did their California counterparts. This consistent, but not statistically significant, finding suggests that these individuals may be particularly attuned to the anti-tobacco message.

This phenomenon may be simply accounted for by their avowed interest in quitting smoking but there may be additional factors contributing to their attunement. Many of these individuals are not native Californians. They have diverse backgrounds, and come from across the U.S. Their environments may have been vastly different than that of many Californians, including less or no exposure to the amount of anti-tobacco advertisements found in California. When they move to California, the presence of anti-tobacco advertisements represent a different culture and a different set of expectations than what they may be familiar with. As a result, they are possibly more aware of the abundance of anti-tobacco advertisements.

If this reasoning is correct, it carries some implication for DHS in its approach to attempt to reduce their rate of smoking in this particular subpopulation. It is entirely possible that the uniformed, active duty 18 to 24 year old Marine stationed in California does not see himself as a Californian. He is likely to see himself as a displaced Iowan, or Tennessean, or Virginian who happens to be living for a short time in California on his way to some other place. Consequently, advertisements aimed at California residents (particularly those built around typical California themes and people) would appear to the active duty serviceman as a message aimed at someone else.

Assuming these conclusions can be verified with additional study, it is reasonable to conclude that smoking rates in the distinct cohort of 18 to 24 year old active duty members should be addressed using two targeted recommendations. First, efforts should be aimed at who that member is: a vigorous, physically active white male with a distinct lifestyle (compared to the same age Californian) who is very valuable to his country and his family. Advertisements should emphasize the reality of the negative aspects of smoking he already believes: smoking hurts your physical conditioning (something that is quite important to him personally and as part of his employment). Effective advertisements should also build on the belief of this group that SHS is dangerous to their wives and children.

Once this cohort has turned their attention to actively stop smoking (as 40% of them currently indicate), readily accessible programs and information on discontinuing tobacco use successfully need to be made available. In this regard, DHS may find it advantageous to partner with the DoD by offering promotional material to individual military bases and their medical treatment facilities (MTFs). By partnering preventative medicine programs in individual MTFs with California programs and community partners, smoking cessation programs will be put into easier reach for many active duty personnel.

APPENDICES

Appendices are comprised of survey data. Therefore, the survey question that generated the data is listed in each Appendix.

APPENDIX A

Do you currently smoke cigarettes?*					
		95% CI	Weighted Sample Size	Weighted Population Size	
Total		21.58%	19.48 - 23.68	2,759	153,064
Sex					
	Female	18.39%	14.05 - 22.73	503	20,143
	Male	22.07%	19.74 - 24.39	2,256	132,922
Age					
	18-24	31.92%	27.78 - 36.07	739	62,309
	25-44	14.88%	12.78 - 16.98	1,751	84,187
	45+	9.42%	5.34 - 13.49	269	6,569
Race/Ethnicity					
	Hispanic	14.34%	8.99 - 19.69	291	22,082
	White non-Hispanic	26.05%	23.26 - 28.84	1,841	89,972
	African American	10.60%	5.92 - 15.27	266	20,500
	Other	20.76%	15.12 - 26.39	361	20,511
Education level					
	High School or less	30.88%	26.14 - 35.62	511	45,887
	Technical school	32.55%	22.50 - 42.59	128	8,908
	Some college	21.00%	17.63 - 24.36	921	54,766
	College degree	10.81%	7.85 - 13.77	646	24,291
	Post graduate	4.95%	2.37 - 7.54	434	12,467
Branch of Service					
	Air Force	17.54%	14.68 - 20.41	879	24,175
	Army	17.79%	14.37 - 21.29	658	18,140
	Marine Corps	26.89%	22.25 - 31.54	478	48,078
	Navy	20.16%	16.82 - 23.50	744	62,671
Rank					
	Junior Enlisted	29.51%	23.94 - 35.08	410	35,569
	Senior Enlisted	22.40%	19.82 - 24.98	1,590	95,331
	Junior Officer	6.58%	3.78 - 9.38	411	13,173
	Senior Officer	2.03%	0.23 - 3.84	313	7,996
	Warrant Officer	15.72%	0.00 - 34.35	35	994

Note: CI = confidence interval

*May also use other tobacco products along with cigarettes

APPENDIX B

On the average, about how many cigarettes a day do you now smoke (1 pack - 20 cigarettes)

Question #20

			95% CI	Weighted Sample Size	Weighted Population size
Total		13.65	12.68 - 14.62%	299	20,204
Sex					
	Female	12.99	10.79 - 15.19%	52	2,363
	Male	13.74	12.68 - 14.80%	247	17,841
Age					
	18-24	12.89	11.45 - 14.33%	122	11,448
	25-44	14.48	13.25 - 15.71%	161	8,375
	45+	18.21	15.27 - 21.16%	16	380
Race/Ethnicity					
	Hispanic	13.44	10.20 - 16.68%	16	1,138
	White non-Hispanic	14.88	13.79 - 15.97%	231	14,957
	African American	10.29	7.087 - 13.49%	19	1,774
	Other	8.42	6.67 - 10.16%	33	2,335
Education level					
	High School or less	13.33	11.69 - 14.97%	94	8,701
	Technical school	13.55	10.71 - 16.38%	23	1,653
	Some college	13.38	11.85 - 14.91%	117	7,047
	College degree	13.75	11.27 - 16.22%	43	1,704
	Post graduate	20.52	11.55 - 29.50%	10	391
Branch of Service					
	Air Force	13.45	11.71 - 15.19%	87	2,824
	Army	14.09	12.04 - 16.14%	72	2,147
	Marine Corps	14.27	12.41 - 16.17%	61	7,284
	Navy	13.03	11.47 - 14.59%	79	7,948
Rank					
	Junior Enlisted	13.42	12.39 - 14.45%	242	18,333
	Senior Enlisted	17.04	13.44 - 20.64%	38	1,197
	Junior Officer	10.74	6.14 - 15.34%	14	454
	Senior Officer	15.07	8.7 - 21.43%	3	71

Note: CI = confidence interval

APPENDIX C

Do you currently use other tobacco products (cigars, pipe, chewing tobacco, and/or snuff)?					
			95% CI	Weighted Sample Size	Weighted Population Size
Total		17.38%	15.46 - 19.31%	2,825	156,402
Sex					
	Female	5.88%	3.19 - 8.58%	514	20,509
	Male	19.12%	16.96 - 21.29%	2,311	135,893
Age					
	18-24	21.64%	17.87 - 25.41%	753	63,471
	25-44	14.78%	12.70 - 16.86%	1,782	85,905
	45+	10.75%	6.49 - 15.00%	290	7,026
Race/Ethnicity					
	Hispanic	12.35%	7.44 - 17.25%	302	22,638
	White non-Hispanic	20.72%	18.19 - 23.25%	1,880	91,914
	African American	14.11%	8.47 - 19.75%	274	20,830
	Other	11.48%	6.88 - 16.08%	369	21,020
Education level					
	High School or less	24.65%	20.19 - 29.11%	516	46,272
	Technical school	23.69%	13.68 - 33.69%	131	9,120
	Some college	14.77%	11.82 - 17.71%	932	55,447
	College degree	11.97%	8.93 - 15.00%	654	24,527
	Post graduate	9.26%	5.86 - 12.66%	437	12,547
Branch of Service					
	Air Force	9.90%	7.68 - 12.13%	893	24,555
	Army	15.79%	12.58 - 19.01%	688	18,983
	Marine Corps	26.04%	21.50 - 30.59%	487	48,934
	Navy	14.10%	11.28 - 16.92%	757	63,930
Rank					
	Junior Enlisted	22.03%	16.83 - 27.23%	424	36,862
	Senior Enlisted	16.52%	14.23 - 18.81%	1,630	96,987
	Junior Officer	14.15%	10.02 - 18.29%	418	13,449
	Senior Officer	11.06%	7.08 - 15.05%	316	8,065
	Warrant Officer	24.14%	5.18 - 43.10%	37	1,039
Smoking status					
	Current non-smoker	12.22%	10.40 - 14.04%	2,288	120,030
	Current smoker	36.81%	31.26 - 42.36%	471	33,034

Note: CI = confidence interval

APPENDIX D

Is the building where you work completely smoke free indoors?					
			95% CI	Weighted Sample Size	Weighted Population Size
Total		96.34%	95.28 - 97.39%	2,744	152,767
Sex					
	Female	98.15%	96.51 - 99.79%	500	19,925
	Male	96.06%	94.87 - 97.25%	2,244	132,842
Age					
	18-24	94.57%	92.33 - 96.81%	740	62,425
	25-44	97.54%	96.60 - 98.47%	1,734	83,785
	45+	97.69%	95.50 - 99.88%	270	6,557
Race/Ethnicity					
	Hispanic	94.08%	90.09 - 98.09%	289	22,131
	White non-Hispanic	97.36%	96.25 - 98.48%	1,834	89,962
	African American	95.18%	91.80 - 98.56%	263	20,284
	Other	95.39%	92.58 - 98.19%	358	20,390
Education level					
	High School or less	95.48%	93.29 - 97.66%	512	46,000
	Technical school	95.31%	89.37 - 100.0%	130	9,103
	Some college	96.42%	94.58 - 98.25%	924	55,077
	College degree	97.59%	95.94 - 99.29%	647	24,214
	Post graduate	97.40%	95.16 - 99.63%	434	12,446
Branch of Service					
	Air Force	98.52%	97.55 - 99.50%	876	24,117
	Army	95.40%	93.29 - 97.52%	651	17,992
	Marine Corps	94.86%	92.28 - 97.45%	481	48,473
	Navy	96.90%	95.45 - 98.36%	736	62,185
Rank					
	Junior Enlisted	93.89%	90.83 - 96.94%	412	35,776
	Senior Enlisted	96.69%	95.47 - 97.91%	1,584	95,161
	Junior Officer	98.25%	96.67 - 99.84%	409	13,048
	Senior Officer	99.62%	99.10 - 100.14%	305	7,801
	Warrant Officer	100.00%		34	981
Smoking status					
	Current non-smoker	96.48%	95.35 - 97.61%	2,248	118,343
	Current smoker	95.78%	93.05 - 98.51%	466	32,862

Note: CI = confidence interval

APPENDIX E

Does anyone ever smoke inside your home?					
		95% CI	Weighted Sample Size	Weighted Population Size	
Total		8.56%	7.16 - 9.96%	2,751	152,952
Sex					
	Female	7.54%	4.47 - 10.61%	501	20,018
	Male	8.72%	7.17 - 10.26%	2,250	132,933
Age					
	18-24	10.94%	8.27 - 13.60%	739	62,488
	25-44	6.81%	5.23- 8.38%	1,736	83,737
	45+	8.37%	4.26 - 12.48%	276	6,726
Race/Ethnicity					
	Hispanic	6.68%	3.16 - 10.20%	291	22,107
	White non-Hispanic	9.14%	7.32 - 10.96%	1,835	90,045
	African American	9.59%	5.31 - 13.87%	262	20,111
	Other	7.07%	3.46 - 10.69%	363	20,689
Education level					
	High School or less	12.30%	9.05 - 15.55%	512	46,044
	Technical school	12.06%	5.08 - 19.04%	128	8,939
	Some college	8.45%	6.17 - 10.73%	927	55,115
	College degree	4.24%	2.33 -6.15%	651	24,441
	Post graduate	3.32%	1.18-5.45%	436	12,486
Branch of Service					
	Air Force	7.04%	5.03 - 9.05%	877	24,125
	Army	13.29%	9.88 - 16.69%	653	17,994
	Marine Corps	9.35%	6.32 - 12.37%	480	48,271
	Navy	7.19%	5.01 - 9.36%	741	62,561
Rank					
	Junior Enlisted	11.12%	7.45 - 7.15%	412	35,945
	Senior Enlisted	8.89%	7.15 - 10.63%	1,588	95,108
	Junior Officer	2.98%	0.82 - 5.14%	409	13,048
	Senior Officer	2.01%	0.50 - 3.52%	307	7,856
	Warrant Officer	10.06%	0.0 - 23.00%	35	994
Smoking status					
	Current non-smoker	4.06%	3.02 - 5.09%	2,259	118,772
	Current smoker	24.63%	19.72-29.53%	462	32,619

Note: CI = confidence interval

APPENDIX F

Are you often exposed to other people’s tobacco at any other place beside your home or workplace?					
			95% CI	Weighted Sample Size	Weighted Population Size
Total		43.32%	40.89 - 45.74%	2,753	153,079
Sex					
	Female	43.70%	38.14 - 49.25%	504	20,156
	Male	43.26%	40.60 - 45.92%	2,249	132,923
Age					
	18-24	55.41%	51.03 - 59.78%	738	62,335
	25-44	35.17%	32.39 - 37.95%	1,740	84,041
	45+	32.99%	26.42 - 39.55%	275	6,703
Race/Ethnicity					
	Hispanic	48.66%	41.57 - 55.74%	292	22,072
	White non-Hispanic	40.62%	37.68 - 43.56%	1,838	90,212
	African American	49.27%	41.65 - 56.89%	264	20,305
	Other	43.56%	36.86 - 50.26%	359	20,490
Education level					
	HS or less	49.42%	44.33 - 54.51%	510	45,821
	Technical school	47.89%	37.55 - 58.22%	130	9,103
	Some college	46.33%	42.36 - 50.30%	930	55,404
	College degree	32.41%	27.54 - 37.28%	649	24,320
	Post graduate	20.93%	15.39 - 26.46%	436	12,486
Branch of Service					
	Air Force	36.73%	33.22 - 40.23%	875	24,056
	Army	47.99%	43.53 - 52.44%	655	18,045
	Marine Corps	49.03%	44.00 - 54.10%	481	48,376
	Navy	40.08%	36.03 - 44.13%	742	62,602
Rank					
	Junior Enlisted	55.71%	49.64 - 61.77%	410	35,665
	Senior Enlisted	43.63%	40.66 - 46.61%	1,592	95,515
	Junior Officer	24.43%	19.61 - 29.28%	409	13,048
	Senior Officer	16.60%	12.08 - 21.11%	307	7,856
	Warrant Officer	27.51%	6.99 - 48.02%	35	994
Smoking status					
	Current non-smoker	39.49%	36.81 - 42.17%	2,260	118,834
	Current smoker	57.09%	51.52 - 62.66%	463	32,683

Note: CI = confidence interval

APPENDIX G

Within the last 30 days, have you seen or heard any anti-tobacco messages?					
Question #94					
			95% CI	Weighted Sample Size	Weighted Population Size
Total		64.62%	62.28 - 67.00%	2,689	148,943
Sex					
	Female	62.83%	57.47 - 68.19%	495	19,759
	Male	64.89%	62.32 - 67.46%	2,194	129,184
Age					
	18-24	66.80%	62.52 - 71.07%	717	60,221
	25-44	63.12%	60.32 - 65.92%	1,703	82,127
	45+	63.32%	56.66 - 69.99%	269	6,595
Race/Ethnicity					
	Hispanic	60.78%	53.76 - 67.80%	292	22,012
	White non-Hispanic	66.57%	63.75 - 69.38%	1,787	86,800
	African American	63.60%	56.23 - 70.97%	258	19,924
	Other	61.43%	55.14 - 67.72%	356	20,208
Education level					
	High School or less	63.38%	58.40 - 68.35%	497	44,257
	Technical school	66.30%	56.08 - 76.52%	125	8,717
	Some college	64.92%	61.09 - 68.75%	907	53,998
	College degree	64.26%	59.59 - 68.93%	637	23,851
	Post graduate	62.80%	56.71 - 68.88%	421	12,191
Branch of Service					
	Air Force	63.89%	60.44 - 67.33%	854	23,469
	Army	63.00%	58.69 - 67.31%	650	17,908
	Marine Corps	66.47%	61.66 - 71.29%	468	46,728
	Navy	63.95%	59.99 - 67.92%	717	60,839
Rank					
	Junior Enlisted	63.98%	61.03 - 66.92%	1,533	111,214
	Senior Enlisted	65.14%	59.87 - 70.41%	424	16,382
	Junior Officer	67.70%	62.48 - 72.93%	403	12,812
	Senior Officer	65.98%	60.01 - 71.95%	294	7,541
	Warrant Officer	77.90%	61.63 - 94.17%	35	994
Smoking status					
	Current non-smoker	63.40%	60.79 - 66.01%	2,208	115,831
	Current smoker	70.22%	64.97 - 75.47%	455	31,850

Note: CI = confidence interval

APPENDIX H

Have you seen or heard anti-tobacco messages on Television?					
Question #95a					
		95% CI	Weighted Sample Size	Weighted Population Size	
Total		96.83%	95.83 - 97.84%	1,710	95,667
Sex					
	Female	96.03%	93.73 - 98.33%	305	12,302
	Male	96.95%	95.85 - 98.05%	1,405	83,366
Age					
	18-24	96.81%	94.92 - 98.70%	480	40,231
	25-44	96.89%	95.78 - 98.00%	1,054	51,343
	45+	96.33%	93.30 - 99.35%	176	4,094
Race/Ethnicity					
	Hispanic	97.26%	94.37 - 100.0%	175	13,138
	White non-Hispanic	96.19%	94.81 - 97.57%	1,178	58,508
	African American	97.64%	95.15 - 100.0%	159	12,447
	Other	98.76%	97.46 - 100.0%	198	11,573
Education level					
	High School or less	97.16%	95.12 - 99.20%	317	28,373
	Technical school	98.26%	94.87 - 100.0%	87	5,893
	Some college	97.29%	95.72 - 98.85%	579	35,275
	College degree	95.41%	92.48 - 98.35%	391	14,258
	Post graduate	93.66%	90.59 - 96.73%	265	7,441
Branch of Service					
	Air Force	96.44%	94.77 - 98.11%	539	15,097
	Army	94.85%	92.23 - 97.47%	408	11,162
	Marine Corps	97.78%	96.23 - 99.32%	304	30,781
	Navy	96.81%	94.91 - 98.71%	459	38,627
Rank					
	Junior Enlisted	96.32%	93.52 - 99.18%	253	20,582
	Senior Enlisted	97.58%	96.44 - 98.71%	981	60,953
	Junior Officer	97.19%	95.12 - 99.27%	264	8,510
	Senior Officer	90.38%	85.46 - 95.30%	189	4,874
	Warrant Officer	88.59%	72.20 - 100.0%	23	748
Smoking status					
	Current non-smoker	96.69%	95.51 - 97.67%	1, 375	72,473
	Current smoker	97.24%	95.33 - 99.15%	325	22,834

Note: CI = confidence interval

APPENDIX I

Did you see or hear any anti-tobacco message on: Radio?					
Question #95b					
			95% CI	Weighted Sample Size	Weighted Population Size
Total		59.95%	56.71 – 63.19%	1,445	82,171
Sex					
	Female	56.75%	49.18 – 64.39%	258	10,345
	Male	60.40%	56.86 – 63.94%	1,187	71,827
Age					
	18-24	59.92%	54.21 – 65.64%	420	35,528
	25-44	60.03%	56.13 – 63.92%	892	43,618
	45+	59.10%	49.52 - 68.66%	133	3,025
Race/Ethnicity					
	Hispanic	61.09%	51.29 - 70.88%	142	10,767
	White non-Hispanic	58.01%	54.09 - 61.92%	996	50,161
	African American	59.63%	49.23 – 70.02%	138	11,075
	Other	68.66%	60.29 - 77.03%	169	1,016
Education level					
	High School or less	60.30%	53.57 - 67.02%	275	24,920
	Technical school	71.30%	59.56 - 83.04%	72	5,043
	Some college	59.37%	54.11 - 64.63%	497	30,535
	College degree	57.89%	50.82 - 64.95%	318	12,054
	Post graduate	54.70%	47.12 - 62.28%	221	6,014
Branch of Service					
	Air Force	54.95%	49.95 - 59.91%	451	112,744
	Army	63.29%	57.51 - 69.07%	349	9,840
	Marine Corps	59.25%	52.54 - 65.96%	251	25,961
	Navy	61.40%	55.97 - 66.83%	394	33,626
Rank					
	Junior Enlisted	61.27%	57.26 - 65.29%	839	61,938
	Senior Enlisted	59.56%	51.72 - 67.40%	212	8,597
	Junior Officer	54.28%	46.75 - 61.80%	223	7,079
	Senior Officer	53.01%	44.07 - 61.95%	150	3,847
	Warrant Officer	42.97%	16.02 - 69.92%	21	711
Smoking status					
	Current non-smoker	56.22%	52.49 - 59.94%	1,144	61,555
	Current smoker	71.43%	65.27 - 77.59%	294	20,391

Note: CI = confidence interval

APPENDIX J

Did you see or hear any anti-tobacco message on: Billboards?				
Question #95c				
		95% CI	Weighted Sample Size	Weighted Population Size
Total	66.64%	63.58 - 69.70%	1,464	83,199
Sex				
Female	63.01%	55.41 - 70.61%	244	9,963
Male	67.13%	63.82 - 70.45%	1,220	73,236
Age				
18-24	69.16%	63.79 - 74.52%	419	35,302
25-44	64.35%	60.60 - 68.09%	904	44,678
45+	70.83%	62.38 - 79.27%	141	3,219
Race/Ethnicity				
Hispanic	68.48%	59.28 - 77.69%	145	11,140
White non-Hispanic	65.43%	61.73 - 69.13%	1,011	50,681
African American	64.67%	54.70 - 74.64%	135	10,777
Other	72.46%	64.57 - 80.35%	173	10,601
Education level				
High School or less	65.73%	59.29 - 72.17%	272	24,463
Technical school	68.68%	56.45 - 80.90%	75	5,114
Some college	67.10%	62.17 - 72.03%	490	30,668
College degree	69.50%	62.80 - 76.19%	334	12,759
Post graduate	59.15%	51.78 - 66.52%	231	6,401
Branch of Service				
Air Force	65.53%	60.81 - 70.24%	450	12,718
Army	65.51%	59.84 - 71.18%	351	9,704
Marine Corps	67.73%	61.56 - 73.89%	264	27,179
Navy	66.51%	61.35 - 71.66%	399	33,598
Rank				
Junior Enlisted	70.60%	62.98 - 78.21%	222	18,331
Senior Enlisted	65.58%	61.72 - 69.44%	822	52,286
Junior Officer	68.28%	61.49 - 75.07%	234	7,593
Senior Officer	60.67%	52.19 - 69.15%	163	4,238
Warrant Officer	60.73%	34.24 - 87.23%	23	751
Smoking status				
Current non-smoker	64.69%	61.17 - 68.22%	1,168	62,590
Current smoker	72.73%	66.72 - 78.75%	287	20,310

Note: CI = confidence interval

APPENDIX K

Did you see or hear any anti-tobacco message on: Newspaper?					
Question #95d					
			95% CI	Weighted Sample Size	Weighted Population Size
Total		36.52%	33.18 - 39.85%	1,323	74,609
Sex					
	Female	31.34%	23.75 - 38.94%	234	9,164
	Male	37.24%	33.60 - 40.89%	1,089	65,445
Age					
	18-24	34.86%	28.91 - 40.80%	376	31,285
	25-44	36.70%	32.69 - 40.71%	823	40,472
	45+	52.19%	42.07 - 62.32%	124	2,852
Race/Ethnicity					
	Hispanic	31.45%	21.65 - 41.25%	128	9,749
	White non-Hispanic	32.23%	28.39 - 36.07%	924	463,339
	African American	34.77%	24.23 - 45.31%	113	9,025
	Other	64.28%	55.39 - 73.17%	158	9,496
Education level					
	High School or less	36.65%	29.53 - 43.76%	244	21,442
	Technical school	35.63%	21.89 - 49.36%	70	4,572
	Some college	35.24%	29.90 - 40.58%	448	28,169
	College degree	38.92%	31.47 - 46.37%	299	11,366
	Post graduate	37.26%	29.46 - 45.06%	205	5,677
Branch of Service					
	Air Force	29.96%	25.22 - 34.71%	417	11,756
	Army	35.51%	29.36 - 41.67%	310	8,642
	Marine Corps	35.31%	28.51 - 42.10%	236	24,109
	Navy	40.33%	34.67 - 46.00%	360	30,102
Rank					
	Junior Enlisted	36.13%	31.96 - 40.31%	755	55,579
	Senior Enlisted	43.29%	35.38 - 51.20%	204	8,198
	Junior Officer	31.93%	24.46 - 39.39%	203	6,476
	Senior Officer	37.65%	28.66 - 46.63%	142	3,687
	Warrant Officer	23.71%	0.00 - 47.69%	19	668
Smoking status					
	Current non-smoker	34.72%	31.06 - 38.37%	1,057	56,664
	Current smoker	42.10%	34.51 - 49.68%	258	17,662

Note: CI = confidence interval

APPENDIX L

Did you see or hear any anti-tobacco message on: Other? Question #95e				
	Percent "Yes"	95% CI	Weighted Sample Size	Weighted Population Size
Total	26.72%	23.35 - 31.11%	671	39,874
Sex				
Female	26.39%	17.01 - 35.77%	128	5,462
Male	26.78%	21.93 - 31.62%	543	34,411
Age				
18-24	29.75%	22.20 - 37.30%	218	18,309
25-44	23.66%	18.56 - 28.76%	400	20,223
45+	31.66%	17.13 - 46.20%	53	1,342
Race/Ethnicity				
Hispanic	28.21%	16.25 - 40.18%	71	5,195
White non-Hispanic	25.24%	20.09 - 30.39%	460	24,548
African American	26.86%	11.22 - 42.51%	57	4,830
Other	32.01%	19.17 - 44.86%	83	5,300
Education level				
High School or less	25.76%	17.49 - 34.02%	136	12,297
Technical school	25.05%	9.30 - 40.79%	40	3,056
Some college	26.48%	19.39 - 33.63%	241	15,026
College degree	31.36%	19.31 - 43.41%	138	5,669
Post graduate	27.86%	17.82 - 37.89%	96	2,683
Branch of Service				
Air Force	21.93%	15.49 - 28.36%	194	5,688
Army	26.96%	19.31 - 34.61%	169	4,777
Marine Corps	26.61%	17.89 - 35.33%	118	12,449
Navy	28.35%	20.91 - 35.79%	190	16,959
Rank				
Junior Enlisted	26.28%	15.93 - 36.63%	120	9,974
Senior Enlisted	27.07%	21.68 - 32.47%	392	25,251
Junior Officer	22.12%	12.79 - 31.45%	91	2,973
Senior Officer	36.07%	22.33 - 49.81%	59	1,413
Warrant Officer	12.05%	0.00 - 30.79%	9	262
Smoking status				
Current non-smoker	23.25%	18.52 - 27.99%	528	29,967
Current smoker	37.32%	27.26 - 47.39%	138	9,659

Note: CI = confidence interval

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PREVENTIVE MEDICINE
AND BIOMETRICS
HEALTH SERVICES ADMINISTRATION

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According to the Privacy Act of 1974 (Public Law 93-579), the Department of Defense is required to inform you of the purposes and use of this survey. Please read it carefully.

Authority: 10 U.S.C., Chapter 55, Section 572, Public Law 102-484, E.O. 9397.

Purpose: This survey helps health policy makers gauge beneficiary satisfaction with the current military healthcare system and provides valuable input from beneficiaries that will be used to improve the military health system.

Routine Uses: None.

Disclosure: Voluntary. Failure to respond will not result in any penalty to the respondent. However, maximum participation is encouraged so that data will be as complete and representative as possible.

Please fill in the bubble to the left of your answer. When you have completed the survey, please return it in the postage paid envelope that has been provided for you. If your envelope is missing, please send the survey back to National Research Corporation, Survey Processing Center, PO BOX 82660, Lincoln, NE 68501-2660.

1. Would you say that in general your health is:
☐ Excellent ☐ Very Good ☐ Good ☐ Fair ☐ Poor
2. Would you say that in general your physical fitness is:
☐ Excellent ☐ Very Good ☐ Good ☐ Fair ☐ Poor
3. Have you ever smoked a cigar, even just a few puffs? (Cigar=large cigar, cigarillo, or small cigar)
☐ Yes ☐ No (Go to #6)
4. When was the last time you smoked a cigar?
☐ Within the past month (0 months to 1 month ago)
☐ Within the past 3 months (More than 1 month to 3 months ago) (Go to #6)
☐ Within the past 6 months (More than 3 months to 6 months ago) (Go to #6)
☐ Within the past year (More than 6 months to 12 months ago) (Go to #6)
☐ Within the past 5 years (More than 1 year to 5 years ago) (Go to #6)
☐ Within the past 15 years (More than 5 to 15 years ago) (Go to #6)
☐ 15 or more years ago (Go to #6)
5. In the past month, did you smoke cigars everyday, several times per week, once per week, or less than once per week?
☐ Everyday ☐ Several times per week ☐ Once per week ☐ Less than once per week
6. Have you ever smoked a tobacco pipe?
☐ Yes ☐ No (Go to #8)
7. Do you now smoke a tobacco pipe every day, some days or not at all?
☐ Every Day ☐ Some Days ☐ Not at all



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8. Have you ever used chewing tobacco such as Redmann, Levi Garrett or Beechnut?
☐ Yes ☐ No (Go to #10)
9. Do you now use chewing tobacco every day, some days, or not at all?
☐ Every Day ☐ Some Days ☐ Not at all
10. Have you ever used snuff, such as Skoal, Skoal Bandits, or Copenhagen?
☐ Yes ☐ No (Go to #12)
11. Do you now use snuff every day, some days, or not at all?
☐ Every Day ☐ Some Days ☐ Not at all
12. Have you smoked at least 100 cigarettes in your entire life? (5 packs=100 Cigarettes)
☐ Yes ☐ No (Go to #15)
13. Have you ever smoked daily for six months or more?
☐ Yes ☐ No
14. Do you now smoke cigarettes every day, some days or not at all?
☐ Every day (Go to #20) ☐ Some days (Go to #17) ☐ Not at all
15. About how long has it been since you last smoked cigarettes regularly?
☐ Less than 1 day ☐ 1 month, but less than 6 months ☐ 5 years or more
☐ 1 day, but less than 7 days ☐ 6 months, but less than 1 year ☐ Never smoked regularly (Go to #46)
☐ 7 days, but less than 1 month ☐ 1 year, but less than 5 years
16. Do you think that there is any possible situation in which you might start smoking again?
☐ Yes ☐ No
17. Did you smoke any cigarettes during the past 30 days?
☐ Yes ☐ No (Go to #22)
18. On how many of the past 30 days did you smoke cigarettes?
☐ Less than 1 day ☐ 10 days, but less than 15 days ☐ 25 days, but less than 30 days
☐ 1 day, but less than 5 days ☐ 15 days, but less than 20 days
☐ 5 days, but less than 10 days ☐ 20 days, but less than 25 days
19. During the past 30 days, on the days that you did smoke, about how many cigarettes did you usually smoke per day? (1 pack=20 Cigarettes)
 _____ (Number of cigarettes) (Go to #21)
20. On the average, about how many cigarettes a day do you now smoke? (1 Pack=20 Cigarettes)
 _____ (Number of cigarettes)
21. How soon after you awake in the morning do you usually smoke your first cigarette?
☐ Less than 15 minutes ☐ 30 minutes, but less than 1 hour ☐ 3 hours, but less than 5 hours
☐ 15 minutes, but less than 30 minutes ☐ 1 hour, but less than 3 hours ☐ 5 hours or more
22. About how old were you when you smoked your first whole cigarette?
☐ 12 or younger ☐ 14-15 ☐ 18-20 ☐ 26-34 ☐ 45-54 ☐ 65 or older
☐ 13 ☐ 16-17 ☐ 21-25 ☐ 35-44 ☐ 55-64
23. About how old were you when you first started smoking cigarettes fairly regularly?
☐ 12 or younger ☐ 14-15 ☐ 18-20 ☐ 26-34 ☐ 45-54 ☐ 65 or older
☐ 13 ☐ 16-17 ☐ 21-25 ☐ 35-44 ☐ 55-64
24. In what situation did you first start smoking cigarettes? (Mark only one)
☐ A stressful situation ☐ While driving
☐ A death or tragedy ☐ For enjoyment
☐ Where alcohol was served ☐ Deployment
☐ Because of marital problems ☐ A move or relocation due to a Permanent Change of Station
☐ In a social situation ☐ To lose weight
☐ The aroma of cigarette smoke ☐ Other (please specify) _____
25. During the past 12 months, have you stopped smoking for 1 day or longer because you were trying to quit smoking?
☐ Yes ☐ No (Go to #27)
26. In your whole life, have you ever made a serious attempt to quit smoking?
☐ Yes ☐ No (Go to #33)



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27. During the last attempt you made to quit smoking, how long did you go without smoking a cigarette?
- ☐ Less than 1 day ☐ 1 month, but less than 6 months ☐ 5 years or more
- ☐ 1 day, but less than 7 days ☐ 6 months, but less than 1 year
- ☐ 7 days, but less than 1 month ☐ 1 year, but less than 5 years
28. Did you use medication such as patches, gum or nasal spray to help you in this quit attempt?
- ☐ Yes ☐ No
29. Did you use counseling advice in this quit attempt?
- ☐ Yes ☐ No
30. Did you use any self-help materials in this quit attempt?
- ☐ Yes ☐ No
31. In what situation did you return to smoking? (Mark only one)
- ☐ A stressful situation ☐ While driving
- ☐ A death or tragedy ☐ For enjoyment
- ☐ Where alcohol was served ☐ Deployment
- ☐ Because of marital problems ☐ A move or relocation due to a Permanent Change of Station
- ☐ In a social situation ☐ To lose weight
- ☐ The aroma of cigarette smoke ☐ Other (please specify) _____
- ☐ Because you were irritable due to smoking withdrawal
32. How long have you been smoking since your last quit attempt?
- ☐ Less than 1 day ☐ 1 month, but less than 6 months ☐ 5 years or more
- ☐ 1 day, but less than 7 days ☐ 6 months, but less than 1 year ☐ Never smoked again after last quit attempt
- ☐ 7 days, but less than 1 month ☐ 1 year, but less than 5 years
33. Since you started smoking regularly, what is the longest time you have ever gone without smoking a cigarette?
- ☐ Less than 1 day ☐ 1 month, but less than 6 months ☐ 5 years or more
- ☐ 1 day, but less than 7 days ☐ 6 months, but less than 1 year ☐ Never smoked regularly (Go to #46)
- ☐ 7 days, but less than 1 month ☐ 1 year, but less than 5 years
34. Would you like to stop smoking?
- ☐ Yes ☐ No
35. Are you planning to quit smoking in the next 30 days?
- ☐ Yes (Go to #37) ☐ No
36. Are you contemplating quitting smoking in the next six months?
- ☐ Yes ☐ No
37. Are you worried about how much money you spend on cigarettes?
- ☐ Yes ☐ No ☐ Never purchased cigarettes (Go to #46)
38. Do you usually buy your cigarettes in California, out of state, or over the Internet?
- ☐ California ☐ Out of state (Go to #40) ☐ Over the Internet (Go to #40)
39. Where do you usually buy your cigarettes?
- ☐ In military commissaries ☐ At tobacco discount stores
- ☐ In military exchanges ☐ At other discount stores such as Wal-Mart
- ☐ At convenience stores or gas stations ☐ On Indian reservations
- ☐ At supermarkets ☐ Other (please specify) _____
- ☐ At liquor stores or drug stores
40. What brand do you usually smoke?
- ☐ Benson and Hedges ☐ Kent ☐ More ☐ Vantage
- ☐ Camel ☐ Kool ☐ Newport ☐ Virginia Slims
- ☐ Carlton ☐ Marlboro ☐ Pall Mal ☐ Winston
- ☐ Generic ☐ Merit ☐ Salem ☐ Other (please specify) _____
41. How long has it been since you changed the brand of cigarettes that you usually smoke?
- ☐ Less than 1 day ☐ 1 month, but less than 6 months ☐ 5 years or more
- ☐ 1 day, but less than 7 days ☐ 6 months, but less than 1 year ☐ Never
- ☐ 7 days, but less than 1 month ☐ 1 year, but less than 5 years



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42. How much do you usually pay for a pack of cigarettes?
☐ ___ Enter response ☐ Don't Know ☐ Never buy cigarettes by the pack
43. How much do you usually pay for a carton of cigarettes? (1 Carton= 10 packs)
☐ ___ Enter response ☐ Don't Know ☐ Never buy cigarettes by the carton
44. Do you think you will smoke a cigarette in the next year?
☐ Definitely Yes ☐ Probably Yes ☐ Probably Not ☐ Definitely Not
45. The last time you purchased cigarettes, did you take advantage of coupons, rebates, buy 1 get 1 free, 2 for 1, or any other special promotion?
☐ Yes ☐ No
46. Are you Spanish/Hispanic/Latino? Mark "No" if not Spanish/Hispanic/Latino.
☐ No, not Spanish/Hispanic/Latino
☐ Yes, Mexican, Mexican-American, Chicano, Puerto Rican, Cuban, or other Spanish/Hispanic/Latino
47. What is your race? Mark one or more races to indicate what you consider yourself to be.
☐ White ☐ Asian (e.g., Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese)
☐ Black or African American ☐ Native Hawaiian or other Pacific Islander (e.g., Samoan, Guamanian, or Chamorro)
☐ American Indian or Alaska Native
48. Are you: Married, Divorced, Widowed, Separated, Never married, or a member of an unmarried couple?
☐ Married ☐ Widowed ☐ Never married
☐ Divorced ☐ Separated ☐ A member of an unmarried couple
49. What is the highest grade or year of school you completed?
☐ Eighth grade or less ☐ Technical School Graduate
☐ Some high school (grades 9-11) ☐ Some College
☐ Grade 12 or GED certificate (high school graduate) ☐ College Graduate
☐ Some technical school ☐ Post graduate or professional degree
50. What is your military rank?
☐ E1 ☐ E3 ☐ E5 ☐ E7 ☐ E9 ☐ O2 ☐ O4 ☐ O6 and above
☐ E2 ☐ E4 ☐ E6 ☐ E8 ☐ O1 ☐ O3 ☐ O5
51. Which of the following categories best describes your annual household income from all sources?
☐ Less than \$10,000 ☐ \$20,000 to less than \$25,000 ☐ \$50,000 to less than \$75,000
☐ \$10,000 to less than \$15,000 ☐ \$25,000 to less than \$35,000 ☐ \$75,000 to \$100,000
☐ \$15,000 to less than \$20,000 ☐ \$35,000 to less than \$50,000 ☐ Over \$100,000
52. At any point were you deployed in support of Operation Iraqi Freedom?
☐ Yes ☐ No
53. In the last three years, what is the total number of months you have been deployed?
☐ 0 months ☐ 7 - 12 months ☐ 19 - 24 months ☐ 31 - 36 months
☐ 1 - 6 months ☐ 13 - 18 months ☐ 25 - 30 months
54. Are you Male or Female?
☐ Male (Go to #56) ☐ Female
55. To your knowledge, are you now pregnant?
☐ Yes ☐ No
- If you DO NOT currently smoke, go to Question 62; otherwise, go to Question 56.
56. Did you see your doctor in the past 12 months?
☐ Yes ☐ No (Go to #62)
57. In the last 12 months, did your doctor advise you to stop smoking?
☐ Yes ☐ No (Go to #62)
58. In the last 12 months, did your doctor suggest that you set a specific date to quit smoking?
☐ Yes ☐ No
59. In the last 12 months, did your doctor prescribe anything to help you to quit smoking?
☐ Yes ☐ No
60. In the last 12 months, did your doctor suggest that you receive any other assistance in quitting?
☐ Yes ☐ No



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61. Did you try to quit when your doctor advised you to stop smoking?
☐ Yes ☐ No
62. Did you see a nurse or other health professional in the past 12 months?
☐ Yes ☐ No (Go to #65)
63. In the last 12 months, did a nurse or other health professional advise you to stop smoking?
☐ Yes ☐ No (Go to #65)
64. Did you try to quit when a nurse or other health professional advised you to stop smoking?
☐ Yes ☐ No
65. In the last 12 months, did a unit commander or other military leadership advise you to stop smoking?
☐ Yes ☐ No (Go to #67)
66. Did you try to quit when a unit commander or other military leadership advised you to stop smoking?
☐ Yes ☐ No
67. Is the building where you work completely smoke free indoors?
☐ Yes (Go to #69a) ☐ No
68. For each of the following indoor areas at your workplace, please indicate whether smoking is allowed.
- a. Indoor work areas
☐ Allowed ☐ Not Allowed
 - b. Special smoking room or lounge
☐ Allowed ☐ Not Allowed ☐ Not Applicable
 - c. Break room or cafeteria
☐ Allowed ☐ Not Allowed
 - d. Hallways or lobby
☐ Allowed ☐ Not Allowed
69. For each of the following outdoor areas at your workplace, please indicate whether smoking is allowed.
- a. Outside the building close to entrances
☐ Allowed ☐ Not Allowed
 - b. Outside the building in a special area on the property
☐ Allowed ☐ Not Allowed
70. Is there an official policy that restricts smoking in any way at your work site?
☐ Yes ☐ No
71. During the past two weeks has anyone smoked in the area in which you work?
☐ Yes ☐ No
72. Do ANY of your friends who smoke ever say that they should quit smoking?
☐ Yes ☐ No ☐ None of my friends smoke
73. Does anyone else living in the household smoke cigarettes now?
☐ Yes ☐ No (Go to #75)
74. How many other household members currently smoke?
☐ One ☐ Two ☐ Three ☐ Four ☐ Five or more
75. What are the smoking rules or restrictions in your household, if any?
☐ Smoking is completely prohibited ☐ There are no restrictions on smoking
☐ Smoking is generally prohibited with few exceptions ☐ Other (specify) _____
☐ Smoking is allowed in some rooms only
76. Does anyone ever smoke inside your home?
☐ Yes ☐ No
77. Are you often exposed to other people's tobacco smoke at any other place besides your home and your workplace?
☐ Yes ☐ No
78. Have you been to a bar, tavern or nightclub including those that are attached to a restaurant, hotel or card club, in California during the past 12 months?
☐ Yes ☐ No (Go to #80)



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79. The last time you went to a bar, tavern or nightclub including those that are attached to a restaurant, hotel or card club, in California, was it smoke free?
☐ Yes ☐ No
80. California has a law prohibiting smoking in bars, taverns and nightclubs including those that are attached to a restaurant, hotel or card club. Do you approve of this law?
☐ Yes ☐ No
81. Have you been to a hookah bar in California during the past 12 months?
☐ Yes ☐ No
82. Think back to the cigarette advertisements you have recently seen in magazines. What brand of cigarettes was advertised the most?
☐ Benson and Hedges ☐ Marlboro ☐ Vantage
☐ Camel ☐ Merit ☐ Virginia Slims
☐ Carlton ☐ More ☐ Winston
☐ generic ☐ Newport ☐ Other (specify) _____
☐ Kent ☐ Pall Mall ☐ None (Go to # 84)
☐ Kool ☐ Salem
83. Of all the cigarette advertisements you have seen, what is the name of the cigarette brand featured in the advertisement that attracts your attention the most?
☐ Benson and Hedges ☐ Kool ☐ Pall Mall ☐ Other (please specify) _____
☐ Camel ☐ Marlboro ☐ Salem ☐ None
☐ Carlton ☐ Merit ☐ Vantage
☐ generic ☐ More ☐ Virginia Slims
☐ Kent ☐ Newport ☐ Winston
84. In the past 12 months have you received a free sample of cigarettes or other tobacco products?
☐ Yes ☐ No
85. Some tobacco companies offer promotional items, such as clothing and bags, which have the company brand name or logo on them and which the public can buy or receive for free. In the past 12 months have you...
a. ...exchanged coupons for an item with a tobacco brand name or logo on it?
☐ Yes ☐ No
b. ...received for free, any gift or item with a tobacco brand name or logo on it?
☐ Yes ☐ No
c. ...purchased any item with a tobacco brand name or logo on it?
☐ Yes ☐ No
86. How annoying do you find other people's smoking?
☐ Not annoying at all ☐ Moderately annoying ☐ Extremely annoying
☐ A little annoying ☐ Very annoying
87. In the past 12 months have you ever asked someone not to smoke?
☐ Yes ☐ No (Go to #90)
88. On the most recent occasion you asked someone not to smoke, who was that person?
☐ Spouse or partner ☐ Child ☐ Friend ☐ Other known person
☐ Parent ☐ Other relative ☐ Co-worker ☐ Stranger
89. On that same occasion, what was the primary reason you asked that person not to smoke?
☐ Smoke was annoying to you
☐ Concerned about long-term health effects of secondhand smoke
☐ Smoking was illegal
☐ Concerned about the smokers health
☐ Concerned about your own health
☐ Other (specify) _____
90. About how many times in the past 12 months has anyone asked you not to smoke when you were smoking or were about to smoke?
☐ Never ☐ Once or twice ☐ Several times ☐ Many times ☐ Have not smoked in past 12 months
91. Did you see or hear any anti-tobacco messages during basic training?
☐ Yes ☐ No ☐ Not sure



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92. Have you seen or heard any anti-tobacco messages at your current command?

☐ Yes ☐ No (Go to #94) ☐ Not sure (Go to #94)

93. Where have you seen or heard anti-tobacco messages at your current command? (Mark all that apply)

☐ Medical Treatment Facility ☐ General Unit Training ☐ Peers
☐ Health and Wellness Classes ☐ Supervisor ☐ Other (specify) _____

94. Within the last 30 days, have you seen or heard any anti-tobacco messages?

☐ Yes ☐ No (Go to #96)

95. Did you see or hear any anti-tobacco message on:

a. TV

☐ Yes ☐ No ☐ Not sure

b. RADIO

☐ Yes ☐ No ☐ Not sure

c. BILLBOARD

☐ Yes ☐ No ☐ Not sure

d. NEWSPAPER

☐ Yes ☐ No ☐ Not sure

e. OTHER

☐ Yes (specify) _____ ☐ No

96. How much additional tax on a pack of cigarettes would you be willing to support if all the money raised was used to fund programs aimed at preventing smoking among children, and other health care programs? What is the highest tax you are willing to support?

☐ \$.25 a pack ☐ \$.75 a pack ☐ \$1.50 a pack ☐ \$3.00 a pack ☐ Other (specify) _____
☐ \$.50 a pack ☐ \$1.00 a pack ☐ \$2.00 a pack ☐ No tax increase

If you DO NOT currently smoke, go to Question 101; otherwise, go to Question 97.

Do you agree or disagree with the following?

97. I rarely smoke when I am the only smoker in the group.

☐ Agree ☐ Disagree

98. Tobacco use has a negative affect on my physical fitness.

☐ Agree ☐ Disagree

99. Tobacco use has a negative affect on my job performance.

☐ Agree ☐ Disagree

100. Smoking cigarettes has a negative affect on my military readiness.

☐ Agree ☐ Disagree

101. Inhaling smoke from someone else's cigarette causes lung cancer in a nonsmoker.

☐ Agree ☐ Disagree

102. Inhaling smoke from someone else's cigarette harms the health of babies and children.

☐ Agree ☐ Disagree

103. If a women smokes when pregnant, it will harm the health of her baby.

☐ Agree ☐ Disagree

104. I prefer to eat in restaurants that are smoke free.

☐ Agree ☐ Disagree

105. Tobacco advertising encourages young people to start smoking.

☐ Agree ☐ Disagree

106. Tobacco companies can lower the nicotine content of tobacco products.

☐ Agree ☐ Disagree

107. Tobacco is NOT as addictive as other drugs such as heroin or cocaine.

☐ Agree ☐ Disagree

108. All indoor worksites, including restaurants and cafeterias, should be smoke free.

☐ Agree ☐ Disagree

109. Local communities should strongly enforce laws that prevent people from selling cigarettes to minors.

☐ Agree ☐ Disagree



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110. Minors caught buying cigarettes should be fined.
☐ Agree ☐ Disagree
111. Store owners should need a license to sell cigarettes (just like alcoholic beverages).
☐ Agree ☐ Disagree
112. Cigarette vending machines should be totally prohibited.
☐ Agree ☐ Disagree
113. The ban on cigarette advertising should be extended to all print and electronic media.
☐ Agree ☐ Disagree
114. Advertising tobacco products at sports and athletic events should be banned.
☐ Agree ☐ Disagree
115. The tobacco industry should be forced to put stronger warnings on all their potentially harmful products.
☐ Agree ☐ Disagree
116. Tobacco products should be treated like other foods and drugs, with each package having full disclosure of potentially harmful contents.
☐ Agree ☐ Disagree
117. Tobacco products should be regulated as a drug by a government agency such as the Food and Drug Administration.
☐ Agree ☐ Disagree
118. The tobacco industry should not be permitted to offer products such as clothing or camping equipment in exchange for coupons on cigarette packs.
☐ Agree ☐ Disagree
119. The distribution of free tobacco samples or coupons to obtain free samples by mail, should not be permitted.
☐ Agree ☐ Disagree
120. In the next century, the production and sale of cigarettes should not be a legitimate business in the United States.
☐ Agree ☐ Disagree
121. The tobacco spokespersons mislead the public when they say tobacco is not addictive.
☐ Agree ☐ Disagree
122. If a person smokes only 5 cigarettes per day, their chances of getting cancer from smoking are about the same as someone who never smokes.
☐ Agree ☐ Disagree
123. Nicotine is a cause of cancer.
☐ Agree ☐ Disagree
124. The government exaggerates the risks of smoking.
☐ Agree ☐ Disagree
125. Do you think your risk of lung cancer is higher, lower, or about the same as other men or women your age?
☐ Higher ☐ About the same ☐ Lower

Thank you for taking the time to complete this questionnaire. Your answers are greatly appreciated.

Return your survey in the postage-paid envelope. If the envelope is missing, please send to: National Research Corporation, Survey Processing Center, PO BOX 82660, Lincoln, NE 68501-2660.



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